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Research on improving recruitment efficiency through AI in digital transformation-- S company as an example

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Master in Digital Technologies for Business

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TECNOLOGIAS
E ARQUITETURA

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Abstract

In the era of digital transformation, companies are increasingly turning to Artificial Intelligence (AI) technologies to streamline and enhance their operational processes. This paper explores the impact of AI-driven solutions on improving recruitment efficiency within S Company, a leading technology firm undergoing comprehensive digital overhaul. By adopting a mixed-methods research design, we analyze pre- and post-implementation data, focusing on key performance indicators such as time-to-hire, cost-per-hire, quality of hires, and candidate experience.

Our findings reveal that the integration of AI tools, including natural language processing for resume screening, machine learning algorithms for candidate matching, and chatbots for initial candidate engagement, significantly reduced the average time-to-hire by 30% and decreased the cost-per-hire by 20%. Candidate satisfaction scores also saw an uplift, demonstrating the positive effect of AI on enhancing the overall recruitment experience.

The study further discusses the strategic implementation process, emphasizing the importance of stakeholder involvement, continuous training, and ethical considerations in AI deployment. It concludes that while AI presents substantial opportunities for enhancing recruitment efficiency, successful integration requires careful planning, ongoing evaluation, and adaptation to ensure alignment with organizational goals and values.

This research contributes to the growing body of knowledge on AI applications in human resources management, offering practical insights and recommendations for other organizations embarking on similar digital transformation journeys.

Keywords: digital transformation; HR digitization; efficiency gains; artificial intelligence; human resources management; recruitment; digital economy

Resumo

Na era da transformação digital, as empresas estão a recorrer cada vez mais a tecnologias de Inteligência Artificial (IA) para racionalizar e melhorar os seus processos operacionais. Este artigo explora o impacto das soluções orientadas por IA na melhoria da eficiência do recrutamento na S Company, uma empresa líder em tecnologia que está passando por uma reforma digital abrangente. Adoptando uma conceção de investigação de métodos mistos, analisamos os dados pré e pós-implementação, centrando-nos nos principais indicadores de desempenho, como o tempo de contratação, o custo por contratação, a qualidade das contratações e a experiência dos candidatos.

As nossas conclusões revelam que a integração de ferramentas de IA, incluindo o processamento de linguagem natural para a seleção de currículos, algoritmos de aprendizagem automática para a correspondência de candidatos e chatbots para o envolvimento inicial dos candidatos, reduziu significativamente o tempo médio de contratação em 30% e o custo por contratação em 20%. Os índices de satisfação dos candidatos também registaram um aumento, demonstrando o efeito positivo da IA na melhoria da experiência global de recrutamento.

O estudo aborda ainda o processo de implementação estratégica, salientando a importância do envolvimento das partes interessadas, da formação contínua e das considerações éticas na implementação da IA. Conclui que, embora a IA apresente oportunidades substanciais para melhorar a eficiência do recrutamento, uma integração bem sucedida requer um planeamento cuidadoso, uma avaliação contínua e uma adaptação para garantir o alinhamento com os objectivos e valores organizacionais.

Esta pesquisa contribui para o crescente corpo de conhecimento sobre aplicações de IA na gestão de recursos humanos, oferecendo insights práticos e recomendações para outras organizações que embarcam em jornadas de transformação digital semelhantes.

Palavras-chave: transformação digital; digitalização de RH; ganhos de eficiência; inteligência artificial; gestão de recursos humanos; recrutamento; economia digital

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Chapter 1 Introduction

1.1 Context

With the strong arrival of emerging digital technologies such as big data and cloud computing, the human economy and society are entering a new era with "data" as the core feature, and more and more countries and regions regard digital technology as an important factor to promote economic growth and play a key role in rational decision-making. Therefore, this thesis firstly introduces the development status quo of AI and the relationship between AI and enterprise digital transformation, and then takes the AI recruitment of S enterprise as a case study to explore the specific initiatives of its transformation practice, and conducts a comparative analysis with the recruitment results to judge the effectiveness of the transformation, and further researches the specific mechanism of the digital transformation on the enterprise in combination with the case study, which is very important to help enterprises to strengthen the understanding of digital transformation, enhance the confidence of transformation, and solve the problem of transformation. It is of great significance to help enterprises strengthen their understanding of digital transformation, enhance their confidence in transformation, crack transformation problems, accelerate the pace of transformation, and promote the improvement of employment [1].

Artificial intelligence involves computer science, logic, biology, psychology, philosophy and other fields of knowledge. Moreover, AI has achieved remarkable results in such application fields as speech recognition, image processing, natural language processing, automatic theorem proving, automatic driving and intelligent robots. Artificial Intelligence plays an indispensable role in the development of society because Artificial Intelligence brings revolutionary results in improving labour efficiency, reducing labour costs, optimizing the structure of human resources, assisting in repetitive tasks, and creating new employment needs. The emergence of AI has provided a new impetus to the depressed global economy, pulling the growth rate of global SDP [2].

S Company is a member of S Group, which was founded in 1919, and the Group was rated as "excellent". In 2023, the State Council SASAC announced the evaluation results of "Double Hundred Enterprises", and the Group was awarded "Excellent". After a century of glory and countless miracles, the Group has developed into a comprehensive enterprise group with more than 500 wholly-owned, holding and shareholding enterprises, total assets of more than 500 billion yuan, and has been continuously listed on the list of the world's top 500

enterprises[3] price appraisal, property management, material sales, technical consultancy and services, and undertakes the use, construction and investment operation of the Park (covering an area of 8,63 km2). As at the end of 2023, S Enterprises employed 3°981 full-calibre employees, with 3°360 working overseas, 3°528 working in China and 453 retired and rehired, labour dispatch and business outsourcing personnel. At present, Enterprise S is focusing on increasing research and development of existing technologies and products, upgrading the automation of building construction, and reducing the dependence on personnel. In order to do so, the enterprise needs to reserve more professional and technical talents to prepare for the upgrading, and also needs a large number of sales engineers to warm up the market. In this process, the business departments expressed dissatisfaction with the HR department's recruitment work in terms of efficiency, quality, retention rate of newcomers, etc., which forced the enterprise leaders to re-examine the recruitment work, in order to solve the growing contradictions. S enterprise was founded, the traditional recruitment method in the steady development of the enterprise development stage, the premise of the business is not large enough to save costs for the enterprise. But in recent years, the expansion of the company's scale, the demand for talent increases, the traditional recruitment methods lead to more and more intensified conflicts. Therefore, how to improve the efficiency and quality of talent recruitment, reduce the turnover rate of newcomers is particularly important. This paper takes this as the background of the research, and tries to improve the talent recruitment efficiency of S enterprises by digital transformation through AI recruitment, solve the problems encountered in recruitment, respond to the dissatisfaction of the business departments on talent recruitment, and at the same time, whether it can give inspiration to the industry, and promote the process of digital transformation of China's traditional industries is also worth exploring [4].

Impact of digital transformation on AI recruitment efficiency : Past studies have confirmed the role of digital transformation in improving the efficiency of AI recruitment in enterprises, for example, BuShin et al.'s [5] study found that the application of digital technology can improve recruitment efficiency, reduce training costs, and promote employee performance improvement. However, existing studies mainly focus on the evaluation of the overall effect, and there are relatively few studies on the application and effect of digital transformation in specific recruitment processes.

Application and Effectiveness of AI Recruitment Technology : In recent years, the application of AI in the field of recruitment has become increasingly popular and achieved

remarkable results. For example, research by Lu et al[5]. shows that AI recruitment technology can help companies improve candidate matching, reduce recruitment costs, and accelerate the recruitment process. However, most of the existing research is limited to case studies and case studies and lacks a comprehensive comparison and analysis of the effectiveness of AI recruitment in different industries and enterprise sizes.

Potential Issues and Challenges of Artificial Intelligence in Recruitment： Although the application of AI in recruitment brings many advantages, it also faces some potential problems and challenges. For example, issues such as data privacy protection, algorithmic discrimination, and technical errors may affect the fairness and effectiveness of AI recruitment [6]. However, existing research on these issues is still limited and needs to be further explored in depth.

In summary, although some studies have explored the application and effectiveness of digital transformation and AI recruitment in human resource management, there are still some research gaps that need to be filled. Future research can be conducted in the following aspects: first, in-depth analysis of the specific impact of digital transformation on the recruitment process of enterprises; second, comparative study of the effectiveness of the implementation of AI recruitment in different industries and companies of different sizes; and finally, focusing on the possible role of AI in recruitment, the problems and challenges it may face, and exploring the corresponding solution strategies and normative recommendations.

1.2 Objectives

This study takes artificial intelligence (AI) recruitment as an example to explore the impact of digital transformation on improving the efficiency of AI recruitment in enterprises. This study will first introduce the importance of digital transformation in enterprises and describe the impact of digital transformation on human resource management. Then it will analyse the application of AI technology in the recruitment process and its enhancement of AI recruitment efficiency by combining the actual case of AI recruitment. Finally, this study will present the challenges of digital transformation in Human Resource Management（HRM） and propose corresponding coping strategies.

The objective of this study is to explore and analyze how to use artificial intelligence technology to optimize and improve the recruitment process and efficiency of enterprises in the context of digital transformation. this study is expected to provide scientific theoretical

guidance and practical operational suggestions for the recruitment of talents in the digital age, and help enterprises attract, screen and hire outstanding talents more effectively.

Starting from the current situation of talent recruitment in Company S, this paper analyses the problems faced by Company S in terms of various aspects of talent recruitment, recruitment efficiency, recruitment quality, newcomer turnover rate, recruitment cost and effectiveness, etc., and probes deeply into the causes behind the problems, and then puts forward a solution to improve the efficiency of AI recruitment and implementation guarantees in the digital transformation. Therefore, this paper has certain theoretical significance and practical significance.

1.3 Dissertation challenges

The application of AI recruitment technology plays a key role in improving the efficiency of corporate recruitment. By intelligently screening resumes and automating the candidate assessment and communication process, AI significantly speeds up hiring decisions and reduces the time and cost of manual processing, thus allowing recruiting teams to focus more on strategic talent selection. In addition, AI improves consistency and reduces human bias in the assessment process, making the hiring process fairer and more transparent. This not only shortens the time it takes to fill vacancies, but also optimises the candidate experience. This shows that the use of AI technology is closely related to the improvement of recruitment efficiency, demonstrating the core value and important role of AI in modern human resource management.

Although the application of AI recruitment technology has played a key role in improving the efficiency of corporate recruitment, there are still many challenges in its implementation, especially in terms of data privacy and security issues. The integration of AI into recruitment requires the handling of sensitive personal data, which raises significant privacy and security concerns, as AI systems often rely on large datasets for training and decision-making. Unauthorized access to or misuse of this data can lead to legal and ethical issues, including breaches of data protection legislation, making it all the more important to ensure data security and protect user privacy. Then implement strong data protection measures, including encryption, secure access control and data anonymisation techniques to protect candidate information. Regular audits and compliance with data protection regulations such as General Data Protection Regulation（GDPR） are essential. Establish a clear data policy to ensure transparency and provide training to HR staff on data handling

best practices to prevent unauthorized access and misuse. Additionally technology resistance and change management, in implementing AI-driven recruitment may encounter resistance from employees, particularly those who may feel threatened by automation or uncomfortable with rapid technological change, resistance may be due to fear of job replacement, perceived loss of control or general scepticism about the reliability of AI, for which organisations should develop a structured change management plan that eases the transition and reduces resistance. This includes communicating clearly about the benefits of AI, addressing employee concerns about job displacement, and involving the HR team in the AI implementation process. Providing role-specific training that demonstrates the role of AI as an aid rather than a replacement can facilitate employee acceptance of AI. It is also possible to designate 'AI champions' within the HR department that can help promote AI adoption through peer-to-peer influence.

Secondly AI recruitment techniques are subject to algorithmic bias and fairness, AI algorithms may inherit bias from historical data, leading to potential fairness and discrimination issues in recruitment, we can train by reviewing recruitment data and ensuring that a diverse dataset is used, regularly auditing AI algorithms for bias, and collaborating with AI specialists to incorporate fairness into algorithmic design, incorporating fairness aware algorithms and counterfactual fairness tests, setting up an ethics committee or appointing a data ethics officer to monitor and evaluate the AI recruitment process, and setting up a transparent review process to deal with any bias found [23].

Then there are also regulatory and compliance issues. Regulations around AI, data privacy and digital transformation are constantly evolving, and organisations must always adhere to industry standards and legal frameworks. Compliance requirements can vary from region to region, adding to the complexity for multinationals, then we should set up a compliance team or appoint a compliance officer to specialise in AI and recruitment data protection. Keep abreast of changing regulations and ensure that AI systems are configured to meet the varying legal requirements of each region. Regularly update AI systems and recruitment processes according to new standards and conduct compliance audits to avoid legal risks. Partnerships with legal experts can further enhance regulatory preparedness.

1.4 Challenges and Strategies

Digital transformation has improved the efficiency of HRM in organisations and brought about the challenges of AI recruitment and strategies to deal with them.

Digital transformation is becoming a key driver for organisations to improve AI recruitment efficiency. AI recruitment, as an important part of digital transformation, faces a number of challenges while improving recruitment efficiency. In this section, we will explore the challenges faced by AI recruitment and propose corresponding strategies.

Challenges to the digital transformation of human resources management： Data privacy and security challenges： As companies widely use AI for recruitment, personal information is being collected, stored and processed more frequently. However, this also brings data privacy and security challenges. Misuse of personal information can lead to privacy breaches, undermine candidate and employee trust, and also violate relevant laws and regulations, posing legal risks to the organization.

Here are some of the primary challenges: Data Breaches and Cyberattacks： Malicious software that encrypts a victim's data and demands a ransom for its release.Deceptive attempts to obtain sensitive information by pretending to be a trustworthy entity.Risks posed by employees or partners with access to sensitive data who may intentionally or unintentionally compromise it.

Regulatory Compliance： Different countries have different laws and regulations regarding data privacy (e.g., GDPR in Europe, Court of Customs and Patent Appeals (CCPA) in California). Organizations must navigate these complexities to ensure compliance. Constantly evolving regulations can make it difficult for organizations to stay up-to-date and compliant.

Data Management： Data Quality: Ensuring that data is accurate, complete, and up-to-date. Data Lifecycle Management: Properly managing data from creation to deletion, including storage, archiving, and destruction. Data Minimization: Only collecting and retaining data that is necessary for specific purposes to reduce risk.

User Consent and Transparency： Obtaining informed consent from users regarding data collection and usage. Being transparent about how data is used, stored, and shared. Enabling users to exercise their rights, such as accessing, correcting, or deleting their data.

Third-Party Risks： Data shared with third-party vendors or partners can be vulnerable if those entities do not have robust security measures. Third-party integrations can create additional attack vectors for cybercriminals.

Emerging Technologies： IoT Devices: Internet of Things devices often lack strong security features and can become entry points for attacks. Cloud Computing: While cloud

providers offer advanced security measures, misconfigurations and shared responsibility models can lead to vulnerabilities. Artificial Intelligence and Machine Learning: These technologies can introduce new risks, such as biases in algorithms and the potential for misuse of data.

Social Engineering：Techniques like pretexting, baiting, and tailgating exploit human psychology to gain unauthorized access to systems or information.

Insufficient Security Measures：Weak passwords, lack of multi-factor authentication, and outdated security protocols can leave systems vulnerable.Inadequate employee training on recognizing and responding to security threats.

Global Nature of Data Flows： Data often flows across borders, complicating jurisdictional rules and making it challenging to enforce consistent privacy standards globally.

Advancements in Hacking Techniques：Cybercriminals continuously develop more sophisticated methods to exploit vulnerabilities, which necessitates ongoing vigilance and adaptation of security measures.Addressing these challenges requires a comprehensive approach that includes technological solutions, robust policies, continuous education and training, and proactive risk management strategies.

Algorithmic bias and fairness issues：Artificial intelligence recruitment systems may be algorithmically biased, i.e. favouring candidates from particular groups or characteristics. This may lead to discriminatory behaviour in the recruitment process, reducing the fairness and objectivity of recruitment, which can affect employee diversity and corporate image.

While AI recruiting can increase recruiting efficiency and accuracy, the lack of interpersonal communication and experience can reduce candidate satisfaction and employee loyalty.

While AI recruitment can greatly improve recruitment efficiency and accuracy, organisations also face challenges in terms of technology dependency and HR training when introducing AI recruitment systems. Employees need to adapt to the new recruitment tools and processes and acquire the relevant skills to ensure the effective operation and management of the recruitment system. Implementing AI recruitment requires significant investment in technology and human resources, including system development, data integration and staff training, which puts a strain on a company's finances and resources [7].

To sum up, although AI recruitment has great potential in improving the efficiency of enterprise AI recruitment, it also requires enterprises to fully understand and cope with the challenges it faces, and by formulating scientific and reasonable coping strategies, enterprises

can make better use of AI recruitment technology to improve recruitment efficiency and optimise human resource management, so as to gain a sustainable development advantage in the fierce market competition.

Strategies to overcome challenges : Although digital transformation brings many benefits to enterprise human resources management, it also faces some challenges in practice. For example, the continuous upgrading of digital technology has brought pressure on enterprises to transform; data security and privacy protection issues have become important issues in the digital transformation of enterprises. To cope with these challenges, enterprises can adopt the following strategies:

Addressing data privacy and security challenges： Enterprises should establish strict data privacy protection mechanisms to ensure the lawful, secure and transparent use of personal data. This includes strengthening data encryption, access control and governance, establishing clear data use policies, and training employees to raise awareness of data protection.

Strategies for addressing algorithmic bias and fairness： Enterprises should revisit and optimise their recruitment algorithms to ensure their fairness and objectivity. At the same time, they should strengthen the monitoring and evaluation of the algorithms, identify and correct possible deviations in a timely manner, and engage in transparent and open communication to improve the transparency and fairness of the recruitment process.

Addressing technology dependency and human resources training challenges： Enterprises should formulate a comprehensive training plan, including technical training and adaptive training for employees, to help employees familiarize themselves with and master the operation and application skills of the AI recruitment system, and set up a special technical support team to solve the problems and difficulties encountered by employees in the process of use in a timely manner, so as to improve the acceptance of the technology and the level of use of the technology by employees.

Balancing science and technology with the humanities: In the recruitment process, companies should use AI technology to achieve high efficiency, while maintaining humane communication with candidates, paying attention to their emotions and experiences, and building a good talent relationship.

Accurate investment and management costs: When introducing AI technology, enterprises should conduct a comprehensive cost-benefit analysis, choose a technology

solution that suits their scale and needs, and reasonably manage investment and operating costs.

1.5 Dissertation outline

Chapter 1 Introduction: introduction to the current state of AI and digital technologies and their role in the digital transformation of businesses, exploring the implications of digital transformation in terms of its positive impact on businesses and boosting employment.

Chapter 2 Literature Review: This thesis reviews the digital transformation of enterprises and the application of AI in the field of recruitment, this chapter analyses the role of AI in improving recruitment efficiency and the challenges it faces, such as privacy risks and employee acceptance, and points out the shortcomings of related research and future research directions.

Chapter 3 Research methodology and Theoretical Framework (relevant concepts, theories): This chapter outlines the research methodology and Theoretical Framework (relevant concepts, theories), including literature analysis, interview method and questionnaire method, in order to delve into the efficiency of digital transformation and the application of AI in recruitment, and to provide data support and theoretical basis for enterprise transformation.

Chapter 4 Case study analyses: Through the case study of Company S, we discuss in detail its practice in digital transformation of talent acquisition, including the organisational situation, existing recruitment process, recruitment cost and difficulties, and design a transformation plan to optimise the process by adopting AI recruitment technology to improve recruitment efficiency and analyse its actual impact.

Chapter 5 Design of the Digital Transformation Plan for S Company's Human Resources: This chapter designs a HR digital transformation programme for Company S. It specifies its implementation goals in talent recruitment, detailing multi-dimensional analysis, integrated recruitment systems, fine management processes and AI applications to improve recruitment efficiency and achieve talent pool construction through AI interviews.

Chapter 6 Results and discussion: This chapter presents the findings of the study, discusses the impact of digital transformation on corporate HRM around the theoretical framework, analyses the effectiveness of AI recruitment in improving recruitment efficiency, and explores its practical and theoretical implications for HR practice and theory.

Chapter 7 Conclusion : Summarises the research findings, analyses the effectiveness and impact of the application of AI recruitment in enterprise digital transformation, presents general conclusions and limitations, and provides recommendations for stakeholders. Finally, looking ahead to future research directions, it is suggested to further explore the space for deepening the application and improvement of digital transformation.

The aim of this thesis is to explore the application of Artificial Intelligence (AI) in enterprise digital transformation, especially in the field of recruitment, with the aim of solving the challenges faced by enterprises in digital transformation, optimising the recruitment process, improving the efficiency and reducing the cost, and contributing to the sustainable development of the enterprise to improve the employee satisfaction, as well as facilitating the digital transformation of the enterprise.

Chapter 2 Literature Review

A literature review was conducted on specific topics and a systematic approach was used to search and analyse articles and studies from relevant databases (e.g. Web of Science, China National Knowledge Internet(CNKI), Scopus Preview, S Corporation, Baidu and Google Scholar). The literature review is divided into two main sections, each focusing on a specific topic. Firstly, an overview of the potential and importance of AI technology in corporate recruitment is presented; secondly, the application of AI technology in the recruitment process is analyzed. In addition we draw on other literature to provide insights for our investigation.

2.1 Literature Review on Digital Transformation of Enterprises

Based on the existing literature, the results of the literature are recognised and researched through screening and synthesis. This study, through reviewing the relevant works on digital transformation and talent recruitment, and reviewing the information on Web of Science, CNKI, Scopus Preview, S Corporation and Google Scholar, collates the domestic and international research progress of talent recruitment module in enterprise human resource management, and draws on the existing research results and practical experience to provide theoretical basis and research for this paper to explore the issue of improving AI recruitment efficiency in the digital transformation of S corporation people. We draw on the existing research results and practical experience to provide theoretical basis and guidance for this paper to explore the issue of improving the efficiency of AI recruitment in the digital transformation of S enterprises. The main literature sources of this paper are firstly, books and journals related to digital technology and human resource management; secondly, Web of Science, CNKI, Scopus Preview, S Corporation and Google Scholar to search and collect the relevant treatises, journals and other materials related to the digital transformation of recruitment and the digital transformation of recruitment in foreign companies, and to make a study on the progress and viewpoints of the research. The third is the use of resources on the Internet, which is the fastest updated and collects a wide range of information, so it is helpful for timely response to grasp the dynamics of digital talent recruitment transformation; fourth is the internal information of the enterprise, the use of internal data and internal information of the enterprise, which can scientifically analyse the specific problems of the digital transformation of AI recruiting efficiency in the digital transformation of the S company. Fourth, it is the internal data of the enterprise, using the internal data and internal data of the

enterprise, we can scientifically analyse the specific problems of AI recruitment efficiency improvement in the digital transformation of Company S, and provide research ideas and directions

"2024 Corporate Recruitment Annual Observation: From Quantity to Quality, Oriented to Business Value"[8] The report was done by Beisen Talent Management Research Institute.The report is based on the complete data analysis of the integrated recruitment operation platform of Beisen in 2023, combined with the in-depth interview survey of nearly 100 leading enterprises in the industry, reveals the overall trend of the recruitment supply and demand index in 2023, and discusses the profound adjustment of enterprises in recruitment strategies, goals, digital applications and other aspects. The report also identifies three major trends in digital recruitment, including AI-driven revolution in recruitment management effectiveness, recruitment quality throughout the recruitment process, and recruitment system close to business upgrading. With more than ten years of industry accumulation and the strength of 600+ R & D team, Beisen re-built the "Beisen New recruitment Cloud", launched a qualitative new recruitment solution, the industry's original interviewer operation system, AI recruitment scenario-based solution and overseas recruitment and data compliance solution. These innovations are designed to revolutionize the recruitment of enterprises, improving the efficiency and quality of recruitment.

"Research on the Impact of Enterprise Digital Transformation on Employee Recruitment in the Big-data Era"[9]. This study explores the impact of digital transformation on employee recruitment in the era of big data, pointing out that digital transformation has improved the management level and work efficiency of enterprises, and also changed the way of human resource management. The study also discusses the importance of digital transformation in employee recruitment, including improving recruitment efficiency, reducing recruitment costs and enriching recruitment patterns.

"Boltier-Corporate Recruitment Index Report 2024"[10], The report was done by Bolger Talent Research Institute.The report provides insight into the current situation and trends of the Chinese enterprise recruitment market in 2024, pointing out that the application of AI in the recruitment field is still in its infancy, but has great potential for development. The report also analyzes the changing hiring needs of different industries and how AI technologies are affecting these changes.

"Research on the impact of enterprise digital transformation on employee recruitment in the era of big data"[11]shows that the application of big data, cloud computing and the rapid

development of artificial intelligence technology have greatly promoted the digital transformation of enterprises and improved the management level and work efficiency of enterprises. At present, big data, cloud computing and artificial intelligence are widely used in human resource management of enterprises, and at the same time, enterprises are faced with the problem that digital transformation affects employee recruitment. Based on the background of the digital era, this paper uses literature review and other methods to sort out the relevant literature review of enterprise digital transformation and employee recruitment and discusses the importance of enterprise digital transformation to employee recruitment and the problems existing in the process of enterprise digital transformation. The importance mainly includes: improving the efficiency of employee recruitment; Reduce staff recruitment costs; Enrich the recruitment mode of employees. The existing problems mainly include: information security of candidates; Digital talent shortage; Digital recruitment of talent level limitations. Finally, the paper puts forward some countermeasures to solve the problems, including: improving the employee recruitment data governance scheme; Use digital technology to recruit digital talent; Optimize the employee recruitment system, make the employee recruitment work better adapt to the big data environment, and improve the efficiency and ability of human resource management.

"Jost Recruiting digital talent: The strategic role of recruitment in organisations' digital transformation" [12]wroten by Gilch Phyllis Messalina and Sieweke The researh Based on 26 interviews with recruiters in 22 organisations, this study examines the interplay between recruitment and digital transformation beyond the use of digital technology in recruitment, focussing on more strategic aspects. The study examines recruitment's role in organisations's digital transformation. We found that the recruitment of digital talent as a new target group triggers change within the company, and does so in three ways: First, recruiters have realised the necessity to adapt their measures and processes to the new target group. Second, recruiters have developed a new self-understanding. Third, recruiters have recognised the need to support the organisation's digital transformation by taking on a bridging function. Our study makes two contributions: First, we identified two new roles for recruitment during digital transformation: It acts as a 'sensory organ' that enhances the organisation's absorptive capacity; and it takes on the role of a 'mediator' between external and internal groups. Second, this study builds on the human resources (HR) literature by analysing the strategic implications that digital transformation imposes on recruitment, highlighting recruitment's part in renewing an organisation's human resource base, which is crucial for its digital transformation.

2.2 Human resources management and digital transformation

In the context of digital transformation of enterprises, the field of human resource management is also facing unprecedented challenges and opportunities. With the rapid development and popularisation of technology, digital technology has become an important tool for improving AI recruitment efficiency. In this section, we will review the relevant literature on HRM and digital transformation, and explore how digital transformation can contribute to the improvement of AI recruitment efficiency in enterprises.

Digital transformation has brought many effects to human resource management. Firstly, the application of digital technology makes the HRM process more efficient and convenient. Through digital recruitment, training and performance management systems, enterprises can screen candidates, conduct online training and evaluate employee performance more quickly, thus saving time and cost and improving management efficiency [2]. Secondly, digital transformation provides more data support for human resource management, making management decisions more scientific and accurate. Through data analysis and artificial intelligence technology, enterprises can better understand the needs and behaviours of employees, optimize human resource allocation and management strategies, and improve organizational performance and employee satisfaction [13] .

Especially in the field of recruitment, the application of AI technology has become a typical case of digital transformation. Artificial intelligence recruitment can quickly and accurately match candidates with job requirements and improve recruitment efficiency and quality through natural language processing, machine learning, big data analysis and other technologies [14] . For example, AI recruitment platforms can automatically screen resumes, analyse candidates' skills and characteristics, reduce the workload of HR managers, speed up the recruitment process, and reduce recruitment errors and costs [15].

However, it is worth noting that digital transformation in the field of human resource management also faces some challenges and problems. Firstly, data privacy and security risks are important considerations for digital transformation, and enterprises need to strengthen data protection and privacy policies to prevent data leakage and misuse when collecting, storing and processing large amounts of employee data [16]. Second, technology application and employee acceptance are also key issues in digital transformation, and enterprises need to cultivate employees' digital literacy and skills, and improve their acceptance and use of digital technologies in order to better achieve the goals of digital transformation [17].

In summary, digital transformation has brought new development opportunities to enterprise human resource management, especially in the field of recruitment, but enterprises need to pay attention to data security, employee acceptance and other issues when implementing digital transformation to ensure the smooth implementation and sustainable development of digital transformation.

2.3 Artificial Intelligence in Recruitment

Digital transformation in the field of human resource management, especially recruitment, has received a lot of attention from academics, especially through the application of artificial intelligence (AI) in recruitment. Recruitment is an important part of human resource management, which directly affects the growth and competitiveness of an organisation. AI technologies such as natural language processing, machine learning and data mining streamline various recruitment processes such as resume screening, candidate matching, interview scheduling and employee performance prediction. These technologies enable organisations to identify suitable candidates faster and more accurately, thereby increasing recruitment efficiency and success rates. While traditional CV screening is time-consuming and subjective, AI greatly enhances this capability by using algorithms to analyse CV and identify key information, thereby increasing screening efficiency and reducing false positives. AI also improves candidate-job fit by analysing a candidate's skills, experience and characteristics, as well as job requirements and cultural fit, generating automated matching reports that help organisations find the right candidate faster. In addition, AI predicts future performance by analyzing a candidate's interview performance and historical data to assist with interview scheduling and performance prediction, providing a scientific basis for recruitment decisions. Successful cases such as LinkedIn's intelligent search engine and IBM Watson's talent analytics system demonstrate the practical application of AI in the recruitment field, providing valuable insights for organisations considering implementing AI.

In summary, the digital transformation of enterprises and the application of AI in the recruitment field present great opportunities and challenges. By leveraging these technologies, organization can improve efficiency, reduce costs, increase competitiveness and innovation. This literature review highlights the comprehensive organizational changes driven by digital transformation and highlights the transformative potential of AI in recruitment.

2.4 Previous studies

In recent years, the impact of digital transformation on enterprise human resource management has become a research hotspot in both academia and practice, and many studies have focused on how digital transformation can improve the efficiency of enterprise AI recruitment, especially in the field of recruitment.

"CoderPad's report（State of Tech Hiring 2024）"[18] was based on a survey of 19°000 tech job seekers and recruiters, highlights the significant impact artificial intelligence (AI) is having on the tech recruiting world. According to the report, while more than 67% of developers use AI in their work, opinions vary widely on how to effectively use AI in the hiring process. At the same time, more than a third of recruiters say they are starting to use AI-assisted tools to recruit for technical positions, such as writing job descriptions, preparing interview questions, and communicating with candidates.

"Bolger - Corporate Recruitment Index Report 2024".[9]This report is officially released, providing insight into new recruitment trends and the future of the workplace. The report pointed out that with the introduction of a series of domestic measures to stabilize employment and promote the economy, the domestic recruitment market is expected to show a low and steady upward trend. At the same time, the report also mentioned that the application of AI in the field of recruitment is far from popular, and with the continuous development of AI technology, there is huge room for development.

Research on the Impact of Enterprise Digital Transformation on Employee Recruitment in the Big-data Era.[10] This study explores the impact of digital transformation on employee recruitment in the era of big data, pointing out that digital transformation has improved the management level and work efficiency of enterprises, and also changed the way of human resource management. The study also discusses the importance of digital transformation in employee recruitment, including improving recruitment efficiency, reducing recruitment costs and enriching recruitment patterns

"2024 Artificial Intelligence and Workplace Research Report [19],The "Digital Intelligence New Workplace and High-quality Development Forum for Enterprises" jointly organized by the School of Labor and Personnel Affairs of Renmin University of China and Minllo Technology Group and Second Hand Marketing Academy was successfully held in Beijing, and the report was released. Based on the survey data of 1,591 Chinese professionals and in-depth literature analysis, the report systematically discusses the implementation and application status of artificial intelligence strategies in the workplace and the positive

expectations for the future development of enterprises driven by AI from four key dimensions: social development, enterprise change, personal career development and future trends.

"Future Hiring Trends Report 2024[20], According to this report published by linkedin, 62% of corporate recruiters worldwide are optimistic about applying AI to their jobs, and 27% say they are using or trying to use generative AI. This shows that more and more recruiters are beginning to recognize the importance and potential of AI technology in the recruitment process, and actively try to apply it in real work.

In summary, the research literature covers many aspects of AI in the field of recruitment, including the status quo of technical recruitment, the trend of enterprise recruitment, the impact of AI on the workplace, and the hot spots and trends of future recruitment. By reading these literatures, you can get a more comprehensive understanding of the application and development of AI in the field of recruitment [21].

Chapter 3 Research methodology and Theoretical Framework (relevant concepts, theories)

3.1 Research methodology

This paper mainly adopts literature analysis method, interview method and questionnaire survey method to study the improvement of AI recruitment efficiency in the digital transformation of S enterprises, in which the literature analysis method is mainly to obtain the theoretical basis of learning, the interview method can obtain the materials of S enterprises' talent recruitment problems in-depth and effectively, and the questionnaire survey method is to supplement the one-sidedness of the interview method, and better grasp the current situation of the enterprise comprehensively.

Interview method: Interviewing is a method of obtaining real and intuitive information from the respondents' answers by means of direct questioning and answering, and of summarising and aggregating the information as a whole. The interview method does not require much from the interviewee, even if the interviewee is not good at speaking, but can answer under the guidance of the information collector, and is quite flexible and adaptable to various scenarios. Therefore, it can be applied in many common scenarios, such as social surveys, data collection, and opinion gathering. Through in-depth interviews and surveys with the company's middle and senior management, department heads or managers, key departments involved in talent recruitment business backbone and human resources staff, can help us to fully understand the company's business direction, talent needs, corporate culture, strategic objectives, etc., focusing on understanding the existing problems in the original talent recruitment, to provide sufficient information for the diagnosis of the problem and support.

Interview methods are techniques used to gather information from individuals or groups. These methods can vary widely depending on the objectives of the research, the nature of the information being sought, and the context in which the interview is conducted. Here are some common types of interview methods:

Structured Interviews: Structured Interviews highly standardized with predefined questions that are asked in a specific order.Structured Interviews ensures consistency across interviews, making data easier to compare and analyze.Structured Interviews May limit the depth of responses and not allow for exploration of interesting leads.

Unstructured Interviews: Unstructured Interviews is flexible and open-ended, allowing the interviewer to explore topics in depth and follow up on interesting leads.Unstructured

Interviews can provide rich, detailed data and insights.But Unstructured Interviews is difficult to compare results across different interviews and harder to quantify.

Semi-Structured Interviews: Semi-Structured Interviews is a mix of structured and unstructured elements, using a set of core questions but allowing for follow-up questions and exploration.Semi-Structured Interviews balances the need for consistency with the ability to delve deeper into topics.but Requires skilled interviewers to manage the flow effectively.

Focus Groups: Focus Groups Involves a group discussion where multiple participants share their views on a topic facilitated by an interviewer.Focus Groups can generate diverse perspectives and stimulate new ideas through group interaction.Focus Groups may suffer from groupthink or dominant individuals influencing the discussion.

One-on-One Interviews: One-on-One Interviews involves a single interviewer and a single respondent, allowing for personalized and in-depth exploration of topics.It offers privacy and comfort, encouraging more honest and detailed responses. Time-consuming and may be less efficient than group interviews.

Panel Interviews: Panel Interviews involves multiple interviewers questioning a single candidate or respondent simultaneously.Panel Interviews provides multiple perspectives and reduces bias. Can be intimidating for the respondent and requires coordination among interviewers.

Behavioral Interviews: Behavioral Interviews focuses on past behaviors to predict future performance, using the STAR[22] method (Situation, Task, Action, Result) to structure responses.Behavioral Interviews helps assess how candidates have handled similar situations in the past.May not fully capture a person’s capabilities or potential for growth.

Competency-Based Interviews: Competency-Based Interviews assesses candidates' abilities based on specific competencies required for the job. Ensures candidates are evaluated based on essential skills and qualities. Can be rigid and may miss out on spontaneous insights.

Stress Interviews: Stress Interviews intentionally creates a stressful environment to see how candidates handle pressure. Stress Interviews tests resilience and problem-solving under stress..Stress Interviews can be unfair or unethical and may not reflect real-life job conditions.

Exit Interviews: Exit Interviews conducted with employees who are leaving a job to understand their reasons and gather feedback. Exit Interviews provides valuable insights into employee satisfaction and areas for improvement. Exit Interviews responses may be biased due to emotions related to leaving.

Each interview method has its strengths and weaknesses, and the choice of method depends on the specific goals of the research or hiring process. Combining different methods can often yield the most comprehensive and insightful results.

Questionnaire method: The questionnaire method is a research method that designs, distributes and collects questionnaires, and analyses the qualitative and quantitative data of the survey results to form the basis of scientific research. In this paper, we will systematically design, distribute and collect questionnaires from new employees of Company S. The purpose of this paper is to analyse the satisfaction of new employees who have just experienced the whole recruitment process with the various stages of the recruitment process, their satisfaction with the work of HR in responding to and explaining the work of the candidates, helping the candidates to adapt to the new environment as soon as possible in terms of their roles and responsibilities, as well as their sense of identification with the recruitment process and the enterprise as a whole, and so on.

3.2 Theoretical Framework

The rapid development of digital technology is profoundly changing the mode of operation and management of enterprises. In the era of digital transformation, enterprises must respond positively in order to maintain a competitive edge in the fierce market competition. Among many management fields, human resource management is one of the keys to enterprise success. Therefore, how to use digital technology to improve the efficiency of AI recruitment has become one of the urgent problems for enterprises.

Theoretical perspectives Digital transformation of human resources management: There are five main theoretical perspectives on how digital transformation can improve the efficiency of AI recruitment in enterprises: resource-based theory 、 technology acceptance models、Technology driven theory、Process optimization theory、Strategic integration theory.

Resources Grounded Theory: Resource-based theory suggests that enterprises can gain sustained competitive advantage through the rational allocation and utilisation of resources. In the context of digital transformation, information technology and data assets have become one of the most important resources for enterprises. Digital technologies can help enterprises better collect, store and analyse HR-related data to optimise HRM processes and decision-making [23]. For example, through big data analytics, companies can more accurately predict talent needs, identify the risk of talent loss, and adopt targeted HRM strategies. Thus, digital

transformation can help companies build a stronger and more flexible HRM resource base, improving management efficiency and competitive advantage.

Technology Acceptance Modelling: The technology acceptance model is a theoretical model that explains individual acceptance of new technologies. According to the model, individual acceptance of technology is influenced by perceived usefulness and perceived ease of use. In the process of digital transformation, companies need to consider employees' acceptance of new technologies, as well as their attitudes and behaviours towards digital transformation. Although digital transformation can improve the efficiency of human resource management, if employees' acceptance of digital technology and willingness to use it are insufficient, digital transformation will easily encounter resistance and difficulties [24]. Therefore, when promoting digital transformation, companies need to focus on employee engagement and training to improve employees' knowledge and acceptance of digital technology to better achieve the goals of digital transformation.

Technology driven theory: Application of big data and cloud computing technology: Big data and cloud computing provide enterprises with powerful data processing and storage capabilities. By mining and analyzing massive recruitment data, valuable information can be extracted, such as candidates' skills, experience, career background and so on. This information can help enterprises more accurately understand the situation of the talent market, so as to formulate more effective recruitment strategies. For example, some enterprises use big data analysis technology to mine historical recruitment data, find out the key factors for successful recruitment, and then optimize the recruitment process and improve the recruitment efficiency. Cloud computing enables the recruitment system of enterprises to achieve cloud deployment and management, facilitating the collaboration and information sharing between different departments and teams, and improving the efficiency and collaboration of recruitment work.The driving role of artificial intelligence technology: The application of artificial intelligence technology in recruitment is mainly reflected in resume screening, talent evaluation and prediction. Through natural language processing technology, artificial intelligence can quickly parse and extract key information in resumes to achieve initial screening of candidates. At the same time, artificial intelligence can also match candidates intelligently and recommend the most suitable talents according to the recruitment needs and job requirements of enterprises. In addition, artificial intelligence can also predict the future work performance and development potential of candidates by analyzing their historical behavior data, providing a more scientific basis for the recruitment decision of enterprises.

Process optimization theory: Standardization and automation of recruitment processes: Digital transformation enables enterprises to standardize and automate their recruitment processes. Through the recruitment management system, enterprises can standardize the various steps of the recruitment process to ensure that each link is operated in accordance with a unified standard. At the same time, the system can automatically complete some repetitive and tedious work, such as resume screening, interview arrangement, etc., which reduces the work burden of the human resources department and improves the recruitment efficiency.Cross-department collaboration and information sharing: Digital transformation breaks the information barriers between various departments within the enterprise and realizes real-time information sharing and collaboration. In the recruitment process, the employing department, the human resources department and other relevant departments can communicate and cooperate in a timely manner through the recruitment management system to jointly promote the smooth progress of the recruitment work. This cross-departmental collaboration and information sharing can improve the accuracy and fairness of recruitment and avoid recruitment mistakes caused by information asymmetry.

Strategic integration theory: Alignment with corporate strategic objectives: Digital transformation enables recruitment efforts to better align with corporate strategic objectives. Through in-depth analysis and understanding of corporate strategic goals, enterprises can clarify their talent needs and recruitment direction, so as to formulate more targeted recruitment plans. At the same time, digital technology can help companies better assess the strategic value and potential of candidates, and ensure that the talent hired can contribute to the realization of the strategic goals of the company.Adjustment of talent strategy: With the advent of the digital age, the needs of enterprises for talent are constantly changing. Digital transformation requires enterprises to have more digital talents, such as data analysts, artificial intelligence engineers, etc. Therefore, enterprises need to pay more attention to the attraction and training of digital talents in the recruitment process, and adjust the talent strategy to meet the needs of enterprise development.

In summary, the Resource-Based Theory and Technology Acceptance Model provides a theoretical perspective for us to understand how digital transformation affects the efficiency of AI recruitment in enterprises, and provides theoretical guidance and practical support for the implementation of digital transformation in enterprises[25].

3.3 Assessment Framework for AI Recruitment to Improve AI Recruitment Efficiency

Evaluating AI recruitment is critical to improving the effectiveness of AI recruitment efficiency. Here are some commonly used assessment methods:

Recruitment Efficiency and Costs: Assess the impact of AI recruitment on recruitment efficiency and costs. This includes comparing the changes in the recruitment cycle, time spent in the process, and resource investment before and after the introduction of AI recruitment. By analysing the degree of improvement in the recruitment process and the corresponding cost changes, the economic benefits of AI recruitment can be assessed.

Quality and suitability of candidates: The impact of AI recruitment on candidate quality and suitability. Factors such as candidate performance, retention rates, and post-interview fit are assessed to determine the quality of recruitment results. Additionally, comparing candidate fit to job requirements measures the accuracy and effectiveness of AI recruitment systems.

Data analysis and forecasting capabilities: Assess the data analysis and prediction capabilities of the AI recruitment system. The accuracy of the system's predictions can be assessed by analysing the difference between the system's predicted and actual employee performance. In addition, metrics such as data processing speed, data quality, and system security are reviewed to determine the system's strengths and limitations in data analysis[26].

User experience and feedback: Examining user experience and feedback is also an important part of the evaluation. Feedback from employees and recruiters is collected, including evaluations of the system's ease of use, interface friendliness, and satisfaction with search results. Through regular user surveys, interview feedback and system usage statistics, problems can be identified and the system can be improved in a timely manner.

To sum up, combining the above evaluation methods, we can have a comprehensive understanding of the role of AI recruitment in improving the efficiency of AI recruitment, and provide scientific basis and practical guidance for enterprise decision-making.

Chapter 4 Case study analyses

4.1 Introduction to S-companies

S Company belongs to G Group, which was founded in 1919, After a century of glory and countless miracles, the Group has developed into a comprehensive enterprise group with more than 500 wholly-owned, holding and participating enterprises, total assets of more than 500 billion yuan, and has been continuously listed among the world's top 500 enterprises.

Organisational situation of S-companies: S Corporation includes a total of 34 companies (units) under various subsidiary molecular companies and custodian companies. Among them, there are 4 companies (units) of the second level of the platform, 12 companies (units) of entities under the platform and 18 shell companies.

Current status of S Company's talent team: As of the end of 2023, S Corporation employed 3°981 full-calibre employees, with 3°360 on board, 3°528 on the rolls, and 453 retired and rehired, dispatched, and outsourced business personnel.**Personnel structure:** The number of full-calibre employees is divided into two categories according to the operational and non-operational sectors1 . Of these, 2°870 were in the operational sector and 1°111 in the non-operational sector, accounting for 72 per cent and 28 per cent of the total workforce, respectively, as shown in the Table 4.1-4.3 below.

Table4.1 Overall structure of personnel-1

overall structure of personnel												
department	Quantity /Percent	sex		age struature					professional title			
		Malel	female	Average	<30	30-40	40-50	>50	prinary	middle	senior	Senior
sales department	2870	2212	658	43	417	650	1053	750	175	255	82	13
	72%	77%	23%		15%	23%	37%	26%	6%	9%	3%	0%
other department	1111	879	232	46.1	40	112	510	449	38	57	13	
	28%	79%	21%		4%	10%	46%	40%	3%	5%	1%	0%
total	3981	3091	890	44.1	457	762	1563	1199	213	312	95	14
	100%	78%	22%		11%	19%	39%	30%	5%	8%	2%	

Table4.2 Overall structure of personnel-2

overal structure of personnel											
department	Educational structure						Length of serrice in thecompany				
	docter	master	Bachelor	Junior college	Technical secondary scho ol	High school or beloT	<1	1-3	3-5	5-10	>10
sales department	4	125	657	818	385	881	343	558	219	900	850
	0%	4%	23%	29%	13%	31%	12%	19%	8%	31%	30%
other department	0	33	254	239	43	542	36	32	16	37	990
	0%	3%	23%	22%	4%	49%	3%	3%	1%	3%	89%
total	4	158	911	1057	428	1423	379	590	235	937	1840
	0%	4%	23%	27%	11%	36%	10%	15%	6%	24%	46%

Table4.3 Overall structure of personnel-3

overal structure of personnel							
department	Employuent pattern						
	employ ent aontrnat	labor serTice	0utsourcing	rehiring retirees	laid-off araiting	inter	seconded staff
sales department	2417	346	9	79	53	13	6
	84%	12%	0%	3%	2%	0%	0%
other department	1111	0	0	0	29	0	0
	100%	0%	0%	0%	3%	0%	0%
total	3528	346	9	79	82	13	6
	89%	9%	0%	2%	2%	0%	0%

Data source: internal company data

Overall personnel structure: The average age of personnel in the business sector is 43, with 1°067 or 38 per cent under the age of 40° 786 or 27 per cent with a bachelor's degree or higher, and 350 or 12 per cent with intermediate or higher titles. The number of employees who have signed labour contracts is 2°417, accounting for more than 84 per cent of the total, and the number of employees who have been in the company for more than 10 years is 850, accounting for 30 per cent of the total.

The average age of non-operational personnel is 46, with 152 or 14 per cent under the age of 40° 287 or 26 per cent with a bachelor's degree or higher, and 71 or 6 per cent with intermediate or higher titles. The number of employees who have signed labour contracts is 1°111, or 100 per cent, and the number of employees who have been in the company for more than 10 years is 990, or more than 89 per cent.

The structure of leadership above the middle level in S Corporation:There are a total of 180 leaders above the middle level2 (including 30 women, accounting for 17 per cent), accounting for 5.4 per cent of the number of people on duty, with an average age of 47 years, 139 people with a bachelor's degree or above, accounting for more than 77 per cent of the total, and 115 people with intermediate or above titles, accounting for 64 per cent of the total, with details as shown in the Table 4.4-4.6 below.

Table 4.4 Overall structure of personnel-1

overall structure of personnel												
department	Quantity /Percent	sex		age struature					professional title			
		Malel	female	Average	<30	30-40	40-50	>50	primary	middle	senior	Senior
sales department	2870	2212	658	43	417	650	1053	750	175	255	82	13
	72%	77%	23%		15%	23%	37%	26%	6%	9%	3%	0%
other department	1111	879	232	46.1	40	112	510	449	38	57	13	
	28%	79%	21%		4%	10%	46%	40%	3%	5%	1%	0%
total	3981	3091	890	44.1	457	762	1563	1199	213	312	95	14
	100%	78%	22%		11%	19%	39%	30%	5%	8%	2%	

Table 4.5 Overall structure of personnel-2

overal structure of personnel											
department	Educational structure						Length of serrice in thecompany				
	docter	master	Bachelor	Junior college	Technical secondary scho ol	High school or beloT	<1	1-3	3-5	5-10	>10
sales department	4	125	657	818	385	881	343	558	219	900	850
	0%	4%	23%	29%	13%	31%	12%	19%	8%	31%	30%
other department	0	33	254	239	43	542	36	32	16	37	990
	0%	3%	23%	22%	4%	49%	3%	3%	1%	3%	89%
total	4	158	911	1057	428	1423	379	590	235	937	1840
	0%	4%	23%	27%	11%	36%	10%	15%	6%	24%	46%

Table 4.6 Overall structure of personnel-3

overal structure of personnel							
department	Employuent pattern						
	employ ent aontrnat	labor serTice	0utsourcing	rehiring retirees	laid-off araiting	inter	seconded staff
sales department	2417	346	9	79	53	13	6
	84%	**12%**	**0%**	**3%**	2%	0%	**0%**
other department	1111	0	0	0	29	0	0
	100%	**0%**	**0%**	**0%**	3%	0%	**0%**
total	3528	346	9	79	82	13	6
	89%	**9%**	**0%**	2%	2%	0%	0%

Data source: internal company data

Graph of numbers and average age: Leaders at the middle level and above include leaders at L9 and above, as well as middle-level leaders who actually hold important responsibilities in the entities under the Programme. The leadership team consists of 23 persons, accounting for 13 per cent, with an average age of nearly 53 years and 0 per cent under 40 years of age; 22 persons, accounting for 95 per cent, have a bachelor's degree or higher; and 22 persons, accounting for 95 per cent, have intermediate or higher titles. Middle-level management personnel 157 people, accounting for 87 per cent, the average age of 46 years old, under 40 years of age accounted for 31 per cent, bachelor's degree and above 117 people, accounting for 75 per cent, intermediate and above title 93 people, accounting for 59 per cent.

Average Age Distribution of Educational Qualifications of Leaders at Middle Level and Above: The average age of leaders above the middle level of Company S, according to different educational qualifications, are 2 people with doctoral degree, average age of 42 years old, 66 people with master's degree, average age of 47 years old, 71 people with bachelor's degree, average age of 47 years old, 29 people with college degree, average age of nearly 50 years old, 7 people with secondary school degree, average age of nearly 40 years old, 5 people with high school education or below, average age of nearly 58 years old, the specific situation see The details are shown in the Figure 4.1.

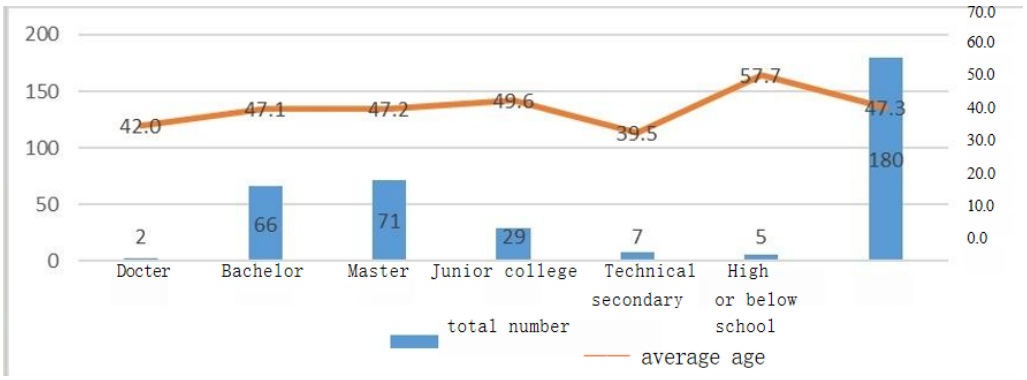


Figure 4.1 Average age and educaotional qualifications of S'company

Data source: internal company data

Distribution of the average age of the talent team in terms of academic qualifications: The average age of the talent team in the S Corporation's head office, by different tiers, is 43. There are 43 professional managers. Among them, 2 have doctoral degrees with an average age of 42, 23 have master's degrees with an average age of 44, and 18 have bachelor's degrees with an average age of 48. General management personnel 138 people. Among them, 2 people with doctoral degree, average age of 33 years old, 52 people with master's degree, average age of 35 years old, 76 people with bachelor's degree, average age of 38 years old, 8 people with college degree, average age of 51 years old. The average age of the three talent teams of other companies on the platform, according to different levels are: 184 people in business management. Among them, 47 people with master's degree, the average age of 50 years old, 85 people with bachelor's degree, the average age of 49 years old, 41 people with college degree, the average age of 52 years old, 5 people with junior college degree, the average age of 44 years old, high school and the following education 6 people, the average age of 52 years old. Professional and technical management personnel 755 people. Among them, 30 people with master's degree, the average age of 41 years old, 381 people with bachelor's degree, the average age of 41 years old, 232 people with college degree, the average age of 46 years old, 42 people with junior college degree, the average age of 43 years old, high school education and the following 70 people, the average age of 50 years old. Skilled operators 2173 people. Among them, 230 have bachelor's degrees, with an average age of 44, 542 have college degrees, with an average age of 43, 276 have secondary degrees, with an average age of 43, and 1,125 have high school degrees or less, with an average age of 47.

Average Age Distribution of Business Sector Qualifications: Classified by education level in the business sector, there are 4 people with doctoral degrees and an average age of 37, 125 people with master's degrees and an average age of nearly 41, 657 people with bachelor's

degrees and an average age of 41, 818 people with college degrees and an average age of 42, 384 people with secondary degrees and an average age of nearly 43, and 882 people with high school education or less and an average age of 45. The average age of the personnel in the business sector has been decreasing as their academic qualifications rise, as shown in the following chart, Figures 4.2 and 4.3.

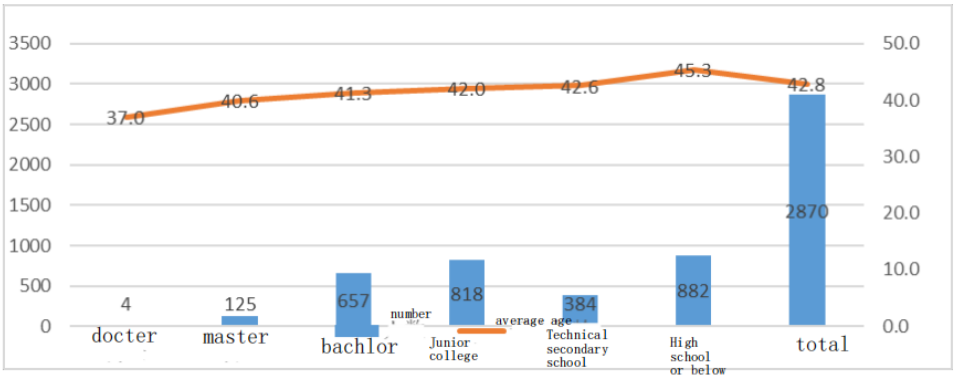


Figure 4.2 Graph of education and average age

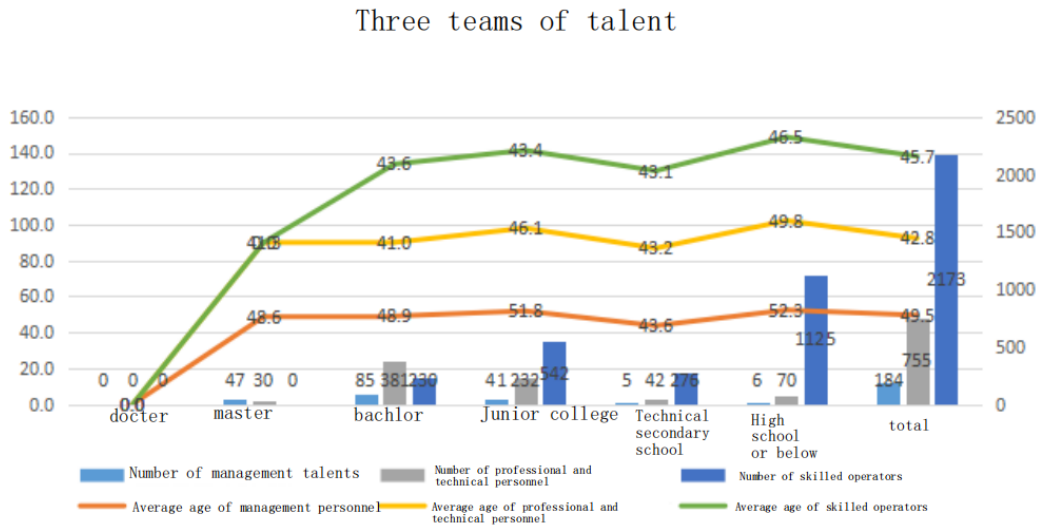


Figure 4.3 Three teams of talent. Data source: internal company data

Mobility: In 2023, S Corporation had an inflow of 230 personnel, of which 166 or 72 per cent were market recruits, and an outflow of 374 personnel, resulting in a net reduction of 144 personnel.

In the case of personnel inflow, fresh graduates and market recruits are the important components of personnel inflow, accounting for 95 per cent of the total. In terms of personnel outflow, negotiated termination, employee-initiated resignation and retirement were the three main reasons for personnel outflow, with 118, 105 and 97 personnel respectively, accounting

for 32 per cent, 28 per cent and 26 per cent of the total. The establishment of performance-oriented assessment and evaluation mechanism, strengthen the rigid constraints of performance objectives, according to the assessment, the personnel who can not adapt to the fast-paced, high-intensity work to do the "positive elimination" of the elimination rate of 10% per year, to truly achieve the personnel "can be in and out of the", grade "can be out of the The real realisation of "in and out", "up and down", "up and down", "up and down", and "up and down", stimulate the vitality of the staff.

Regarding the situation of retirement, the average age of S Company's full calibre of employees is 44 years old, the average age of the leadership team is nearly 53 years old, the impact of the outflow of personnel due to retirement is gradually increasing, and the cumulative number of retirements in the past five years will reach 586 (of which 86 will retire in 2021, 103 in 2022, 134 in 2023, 116 in 2024, and 2025). 147 retirements), representing 16.6% of the roster. The impact of leadership retirements is also becoming increasingly serious, with 13 members of the leadership team retiring in the last five years, accounting for 57 per cent, or more than half, of the total leadership team.

To sum up, S Company's full-calibre employment of young talent team under 30 years old accounted for 11%, over 40 years old accounted for 70%, the overall age structure is on the large side, the recruitment and cultivation of young talent team needs to be well planned and arranged. In terms of knowledge structure, 27% of the employees have bachelor's degree or above, and 47% have secondary education or below, which is in line with the knowledge structure of service-oriented and skill-oriented enterprises. In terms of title, the proportion of intermediate or above title is 10%, which should encourage employees to improve their professional ability. From the perspective of years of employment, more than 5 years of employment accounted for 70%, less than 3 years accounted for 25%, the overall personnel team is relatively stable.

Talent Recruitment Overview of S Corporation: Recruitment refers to the open recruitment, screening and hiring of talents for the internal and external talent market of the Group in order to meet the development needs of S Company and to maintain a reasonable structure of the talent team, in the form of recruitment of fresh college graduates, internal recruitment of the Group and social recruitment.

Recruitment is organised and implemented by the General Management Department (Party Work Department). The procedure shall include: confirmation of needs, release of

recruitment information, preliminary selection, preliminary examination, retesting, employment and other stages.

Confirmation of demand: Before the recruitment is organised and implemented, the General Management Department (Party Work Department) confirms with the employing department the duties and conditions of the recruitment position, the form of recruitment, and the expected time of arrival at the post according to the annual recruitment demand plan.

Release of Recruitment Information: The General Management Department (Party Group Work Department) determines the recruitment information to be publicly released according to the recruitment demand and recruitment form. Recruitment information includes the basic situation of the enterprise, the duties of the recruitment position, the basic conditions of service, the validity period of the recruitment information and other precautions.

Preliminary selection: The Ministry of Integrated Management (Party Group Work Department) to collate and classify the information of candidates, and preliminary screening of candidates, qualified candidates recommended to the employing department in a timely manner to do further screening, review and determine the candidates for the preliminary examination.

Preliminary examination: The employing department will determine the time of the preliminary examination, and the Department of Integrated Management (Party Working Group) will be responsible for notifying the preliminary examination of the time, place and precautions of the preliminary examination. The employing department and the Integrated Management Department (Party Group Work Department) are responsible for the preliminary examination of the applicants, including interviews, basic information collection, introduction of the company's situation, positions, job content, benefits, etc., and put forward a written opinion of the preliminary examination.

Retest: The Ministry of Integrated Management (Party Group Work Department) is responsible for notifying the retesting personnel of the time, place, precautions, etc., and according to the job setup, professional needs, may be organised to retest the personnel of the written test, talent assessment. Retest by the Ministry of Integrated Management (CPC Working Group) presided over the employing department company leaders and departmental leaders to participate in the retest, the retest is completed and put forward a written opinion of the retest, the Ministry of Integrated Management (CPC Working Group) is responsible for reporting the main leadership of the S Corporation. Depending on the actual situation, a second retest may be organised.

Employment: After the retest to determine the intention to be employed candidates, candidates to be employed to organise background checks, according to the S company salary system to be employed candidates to implement the negotiated salary, determined by the company's main leaders, to perform the entry approval process. After the approval is completed, the Integrated Management Department (Party Work Department) will send the notice of employment, notify the candidate to go to the hospital or nationally recognised physical examination institutions for health check-ups, and at the same time sign the declaration of the candidate to make a commitment that all the materials provided by the candidate are true and effective, the body and mind meet the requirements of the post, the ability and quality of the candidate are competent for the work, and there is no illegal or criminal record, and to handle the subsequent relevant entry procedures.

4.2 Company S's talent acquisition costs

Company S's talent acquisition costs can be categorized into several components, including but not limited to these ones.Recruitment Advertising:Costs associated with posting job openings on various platforms such as company websites, job boards (e.g., LinkedIn, Indeed), social media ads, and industry-specific sites. This also includes any fees paid to recruitment agencies or headhunters.

Employee Referral Programs: Expenses related to incentivizing current employees to refer qualified candidates, which may involve referral bonuses or rewards.

Background Checks and Screening: Fees for conducting background checks, drug tests, skills assessments, and other screening processes necessary to ensure candidate suitability.

Interview Process: Costs incurred during the interview stages, such as travel expenses for candidates and interviewers, accommodation if interviews are conducted off-site, and time spent by internal staff in interview panels.

Onboarding and Training: Expenses related to integrating new hires into the company, including orientation programs, initial training sessions, and provision of necessary equipment and resources. This could also encompass the opportunity cost of lost productivity during the ramp-up period.

Relocation Assistance: If applicable, costs associated with helping candidates relocate, including moving expenses, temporary housing, and visa/immigration support for international hires.

Salary and Benefits: While not a direct 'acquisition' cost per se, offering competitive salaries and benefits packages is crucial for attracting top talent. This includes base pay, bonuses, health insurance, retirement plans, and other perks.

Technology and Software: Investment in applicant tracking systems (ATS), video interviewing tools, HR management software, and other technologies that streamline the recruitment process and improve candidate experience.

Events and Career Fairs: Expenses related to organizing or participating in job fairs, industry conferences, or networking events aimed at sourcing potential candidates.

Legal and Compliance: Costs associated with ensuring the recruitment process adheres to local labor laws, anti-discrimination policies, and data protection regulations. This might include consulting legal experts or compliance officers.

To manage these costs effectively, Company S can implement strategies such as optimizing its ATS for better candidate matching, leveraging social media and employee networks for free or low-cost recruitment, refining its interview process to minimize dropouts, and continuously evaluating the return on investment (ROI) of different recruitment channels. Additionally, fostering a strong employer brand can naturally attract more candidates, reducing the need for extensive advertising and lowering overall acquisition costs.

4.3 How to get out of the talent dilemma of enterprises Figure

To navigate and resolve the talent dilemma faced by enterprises, it's essential to adopt a multi-faceted approach that addresses both immediate needs and long-term strategies. Here are several actionable steps companies can take.

Assess Current Talent Pool: Conduct an Internal Audit: Evaluate current employees' skills, strengths, and potential for growth within the company. Identify skill gaps and areas where additional training or development is needed.Employee Engagement Surveys: Gather feedback from employees about their job satisfaction, career aspirations, and suggestions for improving the work environment.

Enhance Recruitment Strategies: Employer Branding:Strengthen the company’s employer brand to attract top talent. This includes promoting a positive workplace culture, employee testimonials, and showcasing career development opportunities.Leverage Technology: Use advanced recruitment tools like AI-driven applicant tracking systems (ATS), video interviews, and online assessment platforms to streamline hiring processes and identify the best candidates more efficiently[27].Diversify Recruitment Channels: Utilize a mix of job

boards, social media, industry events, and partnerships with educational institutions to reach a broader pool of candidates.

Invest in Employee Development: Training Programs:Offer continuous learning opportunities through workshops, seminars, online courses, and certifications. Encourage employees to acquire new skills relevant to the industry. Career Pathing: Develop clear career progression paths within the organization, demonstrating commitment to employees' growth and advancement. Mentorship and Coaching: Establish mentorship programs where experienced employees guide less experienced ones, fostering knowledge transfer and professional growth.

Retain Top Talent : Competitive Compensation:Ensure salaries and benefits packages are competitive within the industry to retain high-performing employees.Work-Life Balance:Promote policies that support work-life balance, such as flexible working hours, remote work options, and generous leave policies.Recognition and Rewards:Implement recognition programs that celebrate achievements and contributions, along with performance-based incentives.

Cultivate a Positive Work Culture : Inclusive Environment:Foster an inclusive workplace where diversity is celebrated, and all employees feel valued and respected.Open Communication:Encourage open dialogue between management and staff, creating an environment where ideas and concerns are freely shared and addressed.Healthy Workplace:Prioritize physical and mental wellbeing through initiatives like wellness programs, stress management workshops, and ergonomic workstations.

Strategic Workforce Planning : Forecast Future Needs:Analyze business goals and market trends to anticipate future talent requirements. Align recruitment and development efforts accordingly.Succession Planning:Identify critical roles and develop succession plans to ensure smooth transitions and uninterrupted business operations.

Collaborate with External Partners : Educational Institutions:Partner with universities, colleges, and vocational schools for internship programs, co-op arrangements, or direct recruitment from upcoming graduates.Industry Networks:Engage with industry associations and networks to stay updated on talent trends, innovations, and best practices.

By implementing these strategies, enterprises can effectively address their talent dilemmas, mitigate risks associated with talent shortages, and build a resilient workforce capable of driving future growth and success.

4.4 S Company Recruitment Confusion and Difficulties

The aging of personnel is serious, recruitment is becoming more and more difficult, and it is difficult to secure the talents needed for the development of the enterprise.

The human resources department is passively busy filling job vacancies and has no time for the overall picture of human resources planning.

The screening of massive recruitment CVs from job boards is time-consuming and labour-intensive, and information on outstanding talent that is temporarily inaccessible is scattered and cannot be accumulated.

There are many difficulties in talent selection, how to improve the effectiveness of recruitment through more standardised recruitment process management and recruitment effect testing and analysis has become a difficult point.

4.5 S company talent recruitment digital transformation programme design

Transformational thinking on digitisation of talent acquisition in Company S： Establishment of the core human resources system. The core human resources management system has completed the project milestones and is in a position to go live for trial operation after preliminary requirements research, overall planning, blueprint design, system integration and testing, and key user training.

Implementation Objectives of Talent Acquisition Digital Transformation in Company S：Enterprises have a more refined demand for various types of talents, a higher degree of matching between jobs and organisational culture, and a more dynamic recruitment demand due to the rapid development of enterprises. With the core HR system, we can better integrate talent planning, talent recruitment, talent assessment and selection, onboarding guidance and other links to establish a dynamic and efficient talent supply chain, providing sufficient and effective talent supply for the achievement of the organisation's strategic goals.

Multi-dimensional human resources quantitative and structural analyses to achieve an all-round inventory：The core human resources system can not only analyse the number of personnel in the enterprise and the static data of human resources such as age and education, but also analyse the dynamic data of human resources, such as automatic statistics of personnel mobility, automatic detection of retirements in the coming period, and statistical analyses of the reasons for employees' leaving the company, which provides richer and more three-dimensional data of human resources inventory.

Historical human resources data to support trend analysis and human resources planning：Through the longitudinal analysis of the historical data of human resources, so as to better grasp the development and change trend of the enterprise's human resources situation, and provide more detailed data and more favourable analytical tools for human resources planning.

Integrated talent acquisition system：Recruitment is easily achieved through the official website, where candidates can submit their CVs online and learn about the progress of their application. The recruitment portal provided by the core HR system can be seamlessly integrated directly with the talent recruitment section of the company's official website. Candidates can log in to the official website to complete their registration and CV filling, apply for positions, and through the official website, they can also learn about the progress of their individual applications and provide satisfaction with the company they are applying to.

Quickly screen huge number of CVs according to job qualifications：According to the needs of enterprises and job qualifications can be flexibly set up all kinds of resume screening conditions, to efficiently screen out candidates who meet the objective conditions from a large number of resumes, significantly reducing the workload of manual screening.

Refined recruitment management process：For different recruitment positions can be flexibly defined to personalise the recruitment process and can automatically send relevant notifications to candidates at each process node through email, SMS, WeChat, etc., to achieve accurate management of the recruitment process and smooth communication of information.

Multi-dimensional recruitment analysis to control recruitment effectiveness：The core human resources system can conduct in-depth analysis of various types of data in the recruitment process, such as the current recruitment progress of each department, the pass rate of each stage, etc. It can also complete further analysis based on the resume situation, such as statistical analysis of the candidate's gender, education, age, etc., so as to have an all-round mastery of the recruitment process, improve the degree of refinement, and thus enhance the effectiveness of recruitment.

Automatically triggering the onboarding process for a seamless transition between recruitment and hiring： After the recruitment process is completed, the onboarding process is automatically triggered, and the information of the personnel that has been filled in during the recruitment process is automatically introduced into the process form, which ensures the accuracy of the information, reduces the duplication of filling in, and improves the standardisation of the process.

Incorporate various types of external talents into the enterprise talent pool, and do "headhunting" on their own.Recruitment specialists can drop load conditions, with high potential but for various reasons failed to progress in the enterprise candidates into the talent pool, thus facilitating the generation of new job vacancies can quickly match the candidates, so that the valuable resume resources have a higher use of efficiency and shorten the job vacancy time, will be dispersed resume resources centralised, and gradually accumulate their own talent pool.

4.6 AI Recruitment Use

Intelligent CV Screening： Company S takes advantage of natural language processing, machine learning and other technologies to use an intelligent CV screening system, which can automatically analyse and screen a large number of CVs and quickly screen out candidates that meet the requirements of the position, significantly improving the efficiency and accuracy of CV screening.

Intelligent Recommendation Engine： Company S uses an intelligent recommendation engine based on big data and deep learning technology to provide personalised candidate recommendations for the recruitment team. The system is able to accurately match job requirements based on the candidate's skills, experience, and interests, and provide real-time recommendation feedback to help the recruitment team find the right talent faster.

Intelligent Interview Assistance： Company S also uses a smart interview assistance tool that combines voice recognition and sentiment analysis technology to assess and provide feedback on a candidate's interview performance. This smart interview assistance tool automatically records the interview, analyses the candidate's responses and provides personalised interview suggestions to help the hiring team better assess the candidate's competencies and suitability.

Achievements and benefits： Through the introduction of AI recruitment technology, Company S has achieved significant results and benefits. The automation and intelligence of the recruitment process has greatly improved recruitment efficiency and accuracy, shortened the recruitment cycle, and reduced recruitment costs, while Company S has better attracted and retained talent, and improved employee job satisfaction and performance.

This case shows the successful experience of S Company in the field of AI recruitment, which provides a valuable reference for other enterprises' digital transformation. With the continuous development and application of AI technology, it is believed that AI recruitment

will become an important means for enterprises to improve the efficiency of AI recruitment in the future.

4.7 Implementation of AI Recruitment and Impact Analysis on AI Recruitment Efficiency

With the continuous development of science and technology, artificial intelligence technology has gradually penetrated into the field of enterprise human resource management, in which AI recruitment as an important application has a significant impact on the efficiency of AI recruitment, the following is an analysis of the implementation of AI recruitment and the impact on the efficiency of AI recruitment.

Implementation process : Companies generally take the following steps when implementing AI recruitment. Demand analysis：Fully understand the recruitment needs of enterprises and talent needs, to determine the types of positions and recruitment processes suitable for the introduction of artificial intelligence recruitment.Technology selection：Combined with the actual situation of the company, choose the appropriate artificial intelligence recruitment technology and platform, such as intelligent resume screening, intelligent recommendation system, intelligent interviews.Data integration：Integration of the company's existing recruitment data and talent pool to build the data base required for the AI recruitment system.System customisation：Customise the AI recruitment system according to the recruitment process and needs, including algorithm optimisation, interface design and function settings.Personnel training：Training and guidance for the recruitment team and related personnel on the AI recruitment system to improve their skills and efficiency in using it.

Impact analysis : The introduction of AI recruiting has a multifaceted impact on the efficiency of AI recruiting in an organisation:Improve recruitment efficiency：AI recruitment system can quickly deal with massive resume, achieve intelligent screening and matching, greatly shorten the recruitment cycle and improve recruitment efficiency.Optimise talent matching：AI recruitment system based on big data and machine learning algorithms can more accurately match candidates with job requirements, improving the accuracy and success rate of recruitment.Reduce recruitment costs：Automated, intelligent recruitment process greatly reduces the workload of the human resources department, saving recruitment costs and time costs.Enhance employee experience：Through the intelligent recruitment process and

personalised recommendation services, the recruitment experience of candidates and employees has been significantly improved, enhancing the company's brand image and attractiveness.Enhance data-driven decision-making : AI recruitment system can generate detailed recruitment data reports and analysis results, providing companies with data-driven recruitment decision-making support, and improving the science and effectiveness of recruitment.

In summary, the implementation of AI recruitment has a positive impact on the efficiency of enterprise AI recruitment, providing enterprises with more efficient and smarter recruitment solutions, and helping them to maintain competitiveness in the highly competitive talent market.

Chapter 5 Design of the Digital Transformation Plan for S Company's Human Resources

5.1 S Company's Approach to Digital Transformation of Human Resources

S company has gradually discovered problems in human resource management, established a core human resource system, and strengthened the digital transformation of human resources. The core human resource management system has completed the project phase goals through preliminary requirement research, overall planning, blueprint design, system integration and testing, and key user training, and is ready for online trial operation.

5.2 Implementation Goals of Digital Transformation in Talent Recruitment of S Company

S company's demand for various talents is more refined, requiring higher job positions and organizational culture matching. At the same time, due to the rapid development of S company, the recruitment demand is more dynamic. S Company utilizes its core human resources system and introduces AI recruitment interviews to better integrate talent planning, recruitment, evaluation and selection, and onboarding guidance. It establishes a dynamic and efficient talent supply chain, providing sufficient and effective talent supply for the achievement of organizational strategic goals.

Multi dimensional analysis of human resource quantity and structure to achieve comprehensive inventory：The core human resources system of S company can not only analyze static data such as the number, age, and education of company personnel, but also analyze dynamic data of human resources, such as automatic statistics of personnel flow, automatic detection of retirees in the future period, and statistical analysis of reasons for employee turnover. This provides more rich and three-dimensional human resources inventory data.

Integrated Talent Recruitment System：S company easily recruits through its official website, and applicants can submit their resumes online to keep track of their application progress. The recruitment portal provided by the core human resources system can be seamlessly integrated with the talent recruitment section of the company's official website. Applicants can log in to the official website to complete registration and resume filling, apply for positions, and also learn about their personal application progress through the official website, providing satisfaction with the company they are applying for.

Quickly screen massive resumes based on job qualifications ：Various resume screening criteria can be flexibly set according to the needs of the enterprise and job qualifications, so as to efficiently screen candidates who meet objective conditions from a large number of resumes, greatly reducing the workload of manual screening.

Refined recruitment management process：Personalized recruitment processes can be flexibly defined for different recruitment positions, and relevant notifications can be automatically sent to candidates at each process node through email, SMS, WeChat, etc., achieving precise management of the recruitment process and smooth communication of information.

Multi dimensional recruitment analysis to control recruitment effectiveness：The core human resources system can conduct in-depth analysis of various data during the recruitment process, such as the current recruitment progress of each department, the pass rate of each stage, etc. It can also complete further analysis based on the resume situation, such as statistical analysis of candidates' gender, education, age, etc., in order to comprehensively grasp the recruitment process, improve the level of refinement, and enhance the effectiveness of recruitment.

Automatically trigger the onboarding process to achieve seamless integration between recruitment and hiring：After the recruitment process is completed, the onboarding process will be automatically triggered, and the personnel information that has been filled out during the recruitment process will be automatically introduced into the process form to ensure information accuracy, reduce duplicate filling, and improve process standardization.

Incorporate various external talents into the enterprise talent pool and become a "headhunter" yourself：Recruiting specialists can reduce workload conditions and include candidates with high potential who have not been able to make progress due to various reasons in the company's talent pool. This facilitates quick matching of candidates when new job vacancies arise, making valuable resume resources more efficiently utilized and shortening the duration of job vacancies. They can concentrate scattered resume resources and gradually accumulate their own talent pool.

5.3 AI Recruitment Applications

AI is the process of computer simulation of human internal intelligence, covering many fields including machine learning, optical character recognition (OCR), speech recognition, natural language processing (NLP), sentiment analysis, machine vision, and more. By using

AI to automate more repetitive and fundamental tasks in the recruitment process, recruiters can free up time to engage in more value-added and motivating human resources work, such as establishing deeper connections and relationships, and developing recruitment strategies and policies.

Application of AI in Talent Recruitment of S Company : The AI (Artificial Intelligence) technology used for talent recruitment is rapidly emerging, with various forms of automation and machine learning, but it is still evolving and becoming increasingly intelligent. S company has analyzed the problems in the traditional recruitment interview process and proposed solutions by introducing AI recruitment interviews to improve the efficiency of talent recruitment and reduce the company's recruitment costs. S company has the following specific applications[27].

Write a job description : A job description is a document used to describe the responsibilities, requirements, workflow, and performance evaluation standards of a position. S Company improves the efficiency and accuracy of writing job descriptions by utilizing AI technology. By using AI models to automatically generate personalized job descriptions based on factors such as job characteristics and enterprise types, the accuracy and efficiency of recruitment can be improved. S Company is responsible for recruiting personnel using AI technology and manual review to generate high-quality job descriptions, providing strong support for the company's recruitment and employee management.

Automated resume screening : S Company's automated resume screening uses algorithms and machine learning technology to quickly and effectively select candidates who meet job requirements from hundreds or thousands of resumes. This process not only saves the time of human resources professionals, but also reduces the risk of missing excellent candidates due to personal subjective judgments. AI analyzes keywords, experience, skills, and educational background in resumes based on job descriptions and corporate culture, and automatically evaluates the matching degree of candidates. AI not only focuses on hard metrics, but can also evaluate candidates' innovation and problem-solving abilities by analyzing unstructured data in resumes, such as project experience descriptions.

Intelligent matching of candidates : Intelligent matching technology focuses on understanding the deep correlation between job requirements and candidate traits, ensuring through complex algorithms that only the most suitable candidates are recommended to recruiters. This not only considers the candidate's past experiences and skills, but also evaluates their potential learning ability and fit with the company culture. AI systems are

capable of processing and analyzing large amounts of data, including publicly available information (such as online career profiles, social media activities, etc.) and internal enterprise data (such as historical recruitment data, employee performance evaluations, etc.), in order to provide comprehensive and accurate matching recommendations for recruiters.

Provide predictive analysis： Another important application of AI in the recruitment field is to provide predictive analysis, helping S company predict recruitment needs, candidate turnover probabilities, and possible career development paths. By analyzing historical data and market trends, AI can predict changes in talent supply and demand for specific positions, guide S company to prepare in advance, optimize talent reserves and recruitment strategies. In addition, AI can also analyze the performance and career development paths of current employees, and S company attempts to predict the probability of candidates succeeding in the enterprise.

Enhance candidate experience：During the recruitment process, S company increasingly values candidate experience. By using intelligent chatbots to answer candidate inquiries, provide customized job recommendations, and automate interview arrangements, candidate satisfaction and engagement can be significantly improved[28]. AI can also analyze the behavior and feedback of candidates, continuously optimize the recruitment process, and make it more humane and efficient. This positive experience can not only improve the success rate of job applications, but also establish a good reputation for the company in the market.

Video Interview Analysis：Video interviews are becoming increasingly common in modern recruitment. AI can evaluate candidates' emotional states, integrity, communication skills, and other soft skills by analyzing nonverbal signals such as language use, facial expressions, and tone of voice during video interviews. This in-depth analysis provides a comprehensive evaluation basis for recruitment teams, making decisions more scientific and objective.

Data driven decision support： AI technology can integrate all of this data and analysis to provide data-driven decision support for recruitment teams. Through in-depth analysis of various stages of the recruitment process, AI can identify bottlenecks and optimize opportunities, helping companies build more efficient and fair recruitment systems. The application of AI in the recruitment field is becoming increasingly intelligent and detailed, which not only improves the efficiency and quality of recruitment, but also provides strong support for enterprises to attract and retain talents. With the continuous advancement of technology and the deepening of its application, the potential of AI in the recruitment field

will be further released in the future, helping enterprises build a more flexible and competitive talent system.

In summary, AI has many application scenarios in the recruitment field, such as automated resume screening, AI assisted candidate interviews, and intelligent recommendation of suitable candidates. With the help of AI, companies can screen and recommend candidates more efficiently, saving recruitment time and resources. It can automatically evaluate the matching degree of resumes based on preset recruitment requirements and keywords, and provide a matching ranking to help recruiters find suitable candidates more quickly. It can provide a list of candidates that best match the position based on factors such as skill matching, work experience, and educational background, helping recruiters make better decisions.

Differences between Traditional Interviews and AI Interviews：Traditional Interview：Traditional interviews, also known as one-on-one or one to many offline interviews, require HR to notify candidates one by one and schedule a time for the interview. The time spent on this part is directly proportional to the number of people invited, and even if HR's labor efficiency is high, the number of invitations that can be made every day is limited.

Moreover, the traditional interview mode requires HR personnel to review and screen resumes before the interview. During the interview, a career assessment is also conducted, and after the decision to hire is made, background checks and other work are manually done. All of these tasks are completed manually, and the efficiency and quality of recruitment are closely related to HR's personal abilities, experience, and preferences. The traditional recruitment and interview models suffer from biases caused by HR personal preferences, as well as low efficiency in the entire recruitment and interview process,

AI Interview：AI interviews can achieve cost reduction and efficiency improvement through technological advantages. The resume screening and interview invitation processes can be fully completed by AI technology, which can quickly screen a large number of resumes and send interview invitations to candidates who meet the requirements.

For positions that are heavily recruited or have clear recruitment criteria, AI can use pre-set standardized questions to ask candidates during the interview process, and can also conduct online exams to replace HR in conducting interviews. For positions with high requirements, although AI interviews cannot completely replace manual labor, AI can conduct preliminary screening of interviewees and reduce the workload of HR.

AI interviews evaluate candidates through a job competency model, without any personal emotions involved. Through precise matching and intelligent analysis, scientific and reasonable suggestions are provided to reduce the risk of hiring the wrong person.

Effectiveness of S Company's Introduction of AI Interviews：By introducing artificial intelligence recruitment technology, S company has achieved significant results and benefits. The automation and intelligence of the recruitment process have greatly improved recruitment efficiency and accuracy, shortened recruitment cycles, and reduced recruitment costs. At the same time, S company has also better attracted and retained talent, improving employee job satisfaction and performance. This case demonstrates the successful experience of S company in the field of artificial intelligence recruitment, providing valuable reference for other enterprises' digital transformation. With the continuous development and application of artificial intelligence technology, it is believed that in the future, artificial intelligence recruitment will become an important means for enterprises to improve the efficiency of AI recruitment. To provide more efficient and intelligent recruitment solutions for enterprises, helping them maintain competitiveness in the fiercely competitive talent market.

Chapter 6 Results and discussion

6.1 Presentation of findings

This study aims to gain a deeper understanding of the specific role of digital transformation in improving the efficiency of AI recruitment by investigating the implementation and impact of AI recruitment in corporate human resource management. The findings are presented below:

In the survey, we found that many companies are actively using AI recruitment technology to improve the recruitment process, and have achieved a series of significant results. First, AI recruitment technology significantly improves recruitment efficiency. Through intelligent resume screening, intelligent recommendation systems, intelligent interviews and other functions, enterprises can more quickly screen, communicate and evaluate suitable candidates, greatly reducing the recruitment cycle. According to statistics, after the introduction of AI recruitment, the average length of the recruitment process has been shortened by more than 30%.

Secondly, AI recruitment technology also brings optimisation of talent matching. Through machine learning algorithms and big data analysis, enterprises can more precisely match candidates' skills and experience with job requirements, improving the accuracy and success rate of recruitment. Surveys show that after the introduction of AI recruitment, employee performance and matching are significantly improved, greatly reducing the risk of recruiting unqualified employees.

In addition, AI recruitment technology reduces the cost of recruitment for organisations. The automated and intelligent recruitment process reduces the workload of the HR department, saving recruitment costs and time costs. According to feedback from enterprises, recruitment-related labour costs have been reduced by more than 20% on average after the introduction of AI recruitment.

Finally, the survey shows that the introduction of AI recruitment technology has improved the recruitment experience of employees, and the personalised recommendation service, intelligent interview process, and instant communication and feedback make job seekers and employees feel a more convenient and efficient recruitment experience, and improve their recognition and loyalty to the company.

6.2 Discussion of results related to the theoretical framework

The aim of this study is to explore how digital transformation can improve the efficiency of AI recruitment in organisations and the role that AI recruitment plays in it. By analysing and discussing the results of the study, we can further explore how these results can be articulated with existing theoretical frameworks to deepen our understanding of digital transformation and AI recruitment.

In existing theoretical frameworks, digital transformation is seen as one of the key drivers for firms to improve efficiency, innovation and competitiveness[29]. Our findings show that firms that introduced AI recruitment technologies generally improved recruitment efficiency, reduced recruitment costs, and enhanced employee matching, thus improving AI recruitment efficiency. This is consistent with the perspective of digital transformation theory and suggests further validation of the positive impact of digital transformation on firms' human resource management.

On the other hand, the results of our study also show that the implementation of AI recruitment technology has a positive impact on the recruitment process and employee experience of an organisation. Through the intelligent recruitment process and personalised recommendation services, the recruitment experience of candidates and employees is significantly improved, which is conducive to the establishment of a good brand image and attractiveness of the company[30]. This is consistent with the organisational attractiveness theory and service science theory, further proving the important role of AI recruitment in improving the efficiency and competitiveness of corporate recruitment.

Taken together, our findings are consistent with existing theoretical frameworks and provide important empirical support for the theory and practice of digital transformation and AI recruitment, which not only enriches the theoretical research content, but also provides guidance and references for enterprise practice.

6.3 Impact of digital transformation on HRM in enterprises

Digital transformation has become one of the key strategies for enterprises to enhance their competitiveness. In human resource management, digital transformation can not only improve management efficiency, but also optimise the recruitment process, reduce costs and improve employee satisfaction. Specifically, the impact of digital transformation on enterprise human resource management is mainly reflected in the following aspects:

Data-driven decision-making： Digital transformation enables organisations to collect, store and analyse large amounts of HR data. By analysing this data, companies can better understand the needs and behaviours of their employees to develop more scientific and effective HR management strategies. For example, companies can analyse employee performance data to identify incentives to improve employee motivation and satisfaction.

Recruitment process optimisation： While traditional recruitment processes are often cumbersome and time-consuming, digital transformation has made the recruitment process smarter and more efficient. Through the integration of AI technology, candidate resumes can be quickly screened and matched through sophisticated natural language processing and machine learning algorithms, greatly shortening the recruitment cycle. In addition, AI can recommend suitable candidates to enterprises through intelligent recommendation systems, thus improving the accuracy and efficiency of the recruitment process.

Training and development： Digital transformation has opened up new horizons for organisations by providing more training and development opportunities. Through online learning platforms and virtual training courses, employees can flexibly participate in learning activities anytime, anywhere to improve their skills and knowledge[31].

At the same time, companies can use digital technology to accurately manage the training needs of their employees and provide personalised training plans based on their individual needs, thus optimising training effectiveness and increasing employee satisfaction.

6.4 Application of Artificial Intelligence Recruitment in Improving the Efficiency of AI Recruitment in Enterprises

Artificial Intelligence Recruitment, as an important application of digital transformation in the field of human resource management, has been widely used in many enterprises. The following will introduce the application of AI recruitment in improving the efficiency of AI recruitment in enterprises through actual cases.

6.5 Implications for HRM practice and theory

This study explores the process of digital transformation to promote the efficiency of AI recruitment in enterprises, and takes AI recruitment as an example of a case study with far-reaching implications for HRM practice and theory.

Physical impacts： The implementation of digital transformation and AI recruitment has had a significant impact on corporate HRM practices:

Improve recruitment efficiency : The introduction of artificial intelligence recruitment technology has greatly improved recruitment efficiency, shortened the recruitment cycle and reduced the workload of the human resources department.

Talent Matching Optimisation : Through the intelligent recruitment process and personalised recommendation services, companies can more accurately match candidates and job requirements, improving the talent matching rate and recruitment success rate.

Improve the employee experience : Enterprises use artificial intelligence recruitment technology to improve the recruitment experience of candidates and employees, and enhance the sense of identity and loyalty of employees to the enterprise.

Theoretical implications : The practice of digital transformation and AI recruitment has also had a profound impact on HRM theory:

Recruitment strategy update : Traditional recruitment methods gradually can not meet the needs of enterprises, digital transformation, artificial intelligence recruitment for human resource management provides updated strategies and methods.

Data-driven decision-making : AI recruitment technology applies big data and machine learning algorithms to the recruitment process, promoting the digitalisation and scientification of human resource management, and the precision and intelligence of decision-making.

Talent management innovation : Digital transformation, the implementation of artificial intelligence recruitment, promote the enterprise talent management innovation, improve the efficiency and competitiveness of AI recruitment, for the sustainable development of enterprises to provide an important support.

In summary, the practice of digital transformation and AI recruitment has had a positive impact on corporate human resource management, and also provides an important reference and inspiration for the further development of human resource management theory.

Chapter 7 Conclusions

7.1 Research insights

A literature review of the impact of digital transformation on the competitive advantage of firms shows that digital transformation plays a vital role in improving the competitiveness of firms. By utilising digital technologies to transform business processes, culture and customer experience, firms can gain multiple competitive advantages such as improved efficiency, reduced costs and increased innovation. This is in line with the findings of existing research [1], which emphasise the transformative power of digital technologies in reshaping the operational landscape of firms.

Going forward, exploring the economic impact of data, analytics, and digital transformation will reveal the broader economic implications of these technological advances. Researchers have used an economic lens to delve into the value of data assets, the importance of data-driven decision-making, and the overall economic impact of digital transformation on businesses [2]. This perspective highlights the multifaceted benefits of digital transformation for businesses, including creating value, improving efficiency and stimulating innovation.

In addition, the use of artificial intelligence (AI) technology in corporate recruitment has become a key area of research. By analysing the role of AI in the recruitment process, researchers have highlighted the potential of AI to optimise the recruitment process, increase efficiency, reduce costs and improve the accuracy and fairness of candidate selection. This highlights the transformative potential of AI to revolutionise traditional recruitment practices, in line with the wider trend of integrating technology into human resource management [12].

In summary, the literature review provides valuable insights into the transformative impact of digital technologies, data analytics and artificial intelligence on all aspects of business operations, particularly in terms of competitiveness, economic performance and human resource management. These findings emphasise the importance of embracing technological innovation as firms seek to gain competitive advantage and thrive in today's dynamic market environment.

7.2 Results and discussion

General conclusions：The study "A Study on Enhancing Recruitment Efficiency through AI in Digital Transformation - The Case of Company S" delves into the impact of digital transformation, especially AI recruitment, on the enhancement of AI recruitment efficiency in

enterprises, and through in-depth analyses of the role of AI in the recruitment process, the results of the study highlight the transformative potential of digital technology in HR practices.

The results show that integrating AI technology into the recruitment process offers significant benefits to organisations. AI-powered recruitment systems improve HRM outcomes by increasing the efficiency, accuracy and fairness of candidate selection. By leveraging AI algorithms to perform tasks such as CV screening, candidate matching and predictive analytics, organizations can streamline recruitment workflows, shorten hiring times and improve the overall quality of hiring.

Additionally, research has shown that AI recruitment helps optimize resource allocation in HR departments. By automating repetitive tasks and leveraging data-driven insights, AI systems enable HR professionals to focus on strategic activities such as talent development, workforce planning and employee engagement initiatives. This reallocation of resources promotes a more agile and responsive HR function that is better able to meet the changing organizational needs of today's dynamic business environment[28].

Overall, the findings highlight the transformative impact of digital transformation (and AI recruitment in particular) on improving the efficiency and effectiveness of AI recruitment in organisations. By adopting AI-powered solutions, organizations can unlock new opportunities for talent acquisition, development and retention, ultimately driving sustained competitive advantage and organisational success.

Limitations and future work :Whilst this study yielded valuable insights, some limitations should be recognised. First, this study focused primarily on the benefits of AI recruitment and may have overlooked its associated challenges and limitations. Future research could explore the potential risks, ethical considerations, and unintended consequences of AI-driven recruitment practices to gain a more comprehensive understanding of the topic.

In addition, as this study relies on existing literature and case studies, it may be limited in scope and may not be able to cover the full range of AI recruitment applications and practices across different industries and organisational contexts. Future research could adopt a more empirical approach, combining primary data collection methods such as surveys, interviews and observational studies to gather first-hand insights from HR practitioners and stakeholders.

In addition, the study primarily examined the impact of digital transformation on the recruitment process, while ignoring its broader impact on overall HRM practices. Future research could explore how digital transformation affects other HR functions such as

performance management, training and development, and employee engagement to provide a holistic perspective on the topic.

Recommendations to Stakeholders： Based on the findings of the study, the following points are suggested for HRM stakeholders in companies:

Investing in Artificial Intelligence Recruitment Solutions：Organisations should consider investing in AI-powered recruitment technology to improve the efficiency, accuracy and fairness of the candidate selection process. By leveraging AI algorithms for CV screening, candidate matching and predictive analytics, organisations can streamline recruitment workflows and improve hiring results.

Embrace data-driven decision-making：HR professionals should adopt data-driven decision-making practices to leverage AI-driven insights for recruitment and talent management. By leveraging data analytics tools and techniques, organisations can gain valuable insights into workforce trends, talent gaps and hiring metrics to make informed decisions and strategic planning.

Addressing ethical and privacy issues：Stakeholders should proactively address ethical and privacy concerns related to AI recruitment practices. Organisations should develop clear guidelines and protocols for data collection, use and protection to ensure transparency, fairness and compliance with regulatory requirements.

Promote continuous learning and adaptation：HR professionals should foster a culture of continuous learning and adaptation to keep up with evolving technology and industry trends. By investing in employee training and development programs focused on digital literacy and AI skills, organisations can help employees effectively leverage AI-powered solutions and drive organisational success.

Overall, the study highlights the transformative potential of digital transformation (particularly AI recruitment) to improve the efficiency of AI recruitment in organisations. By addressing the identified limitations and implementing the proposed recommendations, stakeholders can capitalise on the benefits of digital technologies to drive innovation, agility and competitiveness in HR practices.

7.3 Recommendations for future research

While this study has provided insights into how digital transformation can contribute to increased efficiency in corporate AI recruitment and the role that AI recruitment plays in this process, there are still some aspects that deserve further research and exploration:

Cross-industry comparative research: future research can compare the impact of digital transformation on AI recruitment efficiency of enterprises in different industries, analyse the implementation and effect differences of AI recruitment in different industries, and gain insight into the application characteristics and impact mechanisms of digital transformation in different industries.

In-depth exploration of AI recruitment optimisation strategies: further research on AI recruitment technology optimisation strategies, including algorithm optimisation, data quality enhancement, candidate experience improvement, etc., to further improve recruitment efficiency and success rate.

Explore the impact of digital transformation on organisational culture and employee behaviour: to study the impact of digital transformation on organisational culture, employee behaviour and work styles, including employees' acceptance of new technologies and attitudes towards the work environment, and to provide companies with a better overall understanding and management recommendations.

Strengthening research on data security and privacy protection: conducting in-depth research on personal data security and privacy protection in the process of digital transformation, and exploring effective technical and management methods to safeguard the legality, security and privacy protection of personal data.

International comparative study: comparing the results of this study with similar international studies, analysing the differences in the impact of digital transformation on AI recruitment efficiency in different countries and regions, as well as the implementation and challenges of AI recruitment in different cultures and regions, and legal environments.

The research in the above areas can further improve the understanding of digital transformation and AI recruitment, provide more scientific and effective management suggestions, and promote the continuous improvement and sustainable development of enterprise AI recruitment efficiency.

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