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Research Article

Use of Artificial Intelligence in Talent Acquisition to Enhance Operational Efficiency

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ABSTRACT

An important benefit of digital recruitment is that it increases the volume of job applications received and diversifies the applicant pool, especially when artificial intelligence (AI) is used. There is a delicate relationship between talent acquisition and operational efficiency by AI. The operational aspects are impacted by recruiting efficient personnel. This paper aims to investigate how implementing AI in the talent acquisition process affects the operational efficiency of the company.AI lessens the value of interpersonal relationships between people when hiring. According to ambidexterity theory, a company can successfully balance stability and adaptability to shifting market conditions by instantaneously outshining at both utilizing current efficiency and discovering new chances; by supporting current operations and following new endeavours and ideas.The business serves various functions, like operational process that deals with customers and administration of organisation. Operation of business and administration are vital for all companies. The business process is divided into primary and secondary functions. Human resource management (HRM) is regarded as the secondary function. Application of artificial intelligence (AI) in electronic HRM is helping to progress productivity, service distribution, and standardization, enhances HR to concentrate on more motionless activities. When recruiting talented applicants, AI has the possibility to streamline many physical processes. By mechanically setting up appointments grounded on candidates' accessibility and scanning resumes, less HR managers need to work on talent acquisition, but they can concentrate on other value-added jobs.

Keywords: Digital recruitment, artificial intelligence, operational efficiency, ambidexterity theory, human resource management, value-added jobs

Introduction

Through automated candidate screening, data-driven insights, and intelligent candidate sourcing, recruiters can restructure processes, decrease bias, and detect top contenders rapidly through artificial intelligence (AI). This permits them to emphasis on more tactical aspects of acquiring employees, also enlightening the excellence of new recruiters (Meijerink, J. et al -2023).Recent years have seen a substantial increase in the use of technology in human resource management (HRM), primarily as a result of organizations' need to adapt to a fast changing, digital business environment. Hiring, employee joining, and performance management were among the many manual HRM procedures that took a lot of time and effort to handle in the past (Stutty Srivastava (2024).But the introduction of new technologies, such as automation, data analytics, and cloud-based HR systems,

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has changed how businesses handle their employees.These developments have made it possible for HR managers to move from managerial work to more strategic positions, which has improved employee engagement, effectiveness, and decision-making.By automating cognitive processes and applying decision theory ideas to the hiring process, AI greatly enhances HRM decision-making. A fundamental foundation for understanding how AI can improve the accuracy and data-driven decision-making of human resources (HR) professionals is provided by the field of decision theory, which focuses on rationality and decision-making processes in uncertain situations.The advantage of AI recruitment relates to the influenced cultural suitability and uniqueness because human unconscious bias is modestly associated, enabling fair analysis (Altemeyer, 2019).

Review of literature

AI in talent acquisition offers a delicate balance between human-to-human engagement and transactional efficiency. The operational and organizational design aspects are impacted by the trade-off between relational engagement and transactional efficiency (Dhyana Paramita et al (2024). Increased operational efficiency results from AI's improved ability to carry out transactional tasks.There is an intricate trade-off for businesses looking to use AI in their hiring procedures, requiring further research into how AI tools, such as chatbots, can be used efficiently without sacrificing the fundamentally human aspects of hiring and biases.The study aims to investigate the operational and organizational aspects of the possible application of AI in the hiring process. In particular, they want to know how these organizational structures and operational workflows are affected by the relational (individuals-oriented) and transactional (job-oriented) components of AI.

Sania Khan et al (2024) described that the cost-benefit, opportunities, and risk factors of AI in talent acquisition relate to tactical analysis and decision-making.Using the analytical hierarchy process, a multi-criteria decision-making framework, opinions were gathered in several rounds according to the cost, benefit, opportunity, and risk evaluation criteria. The results showed that the majority of respondents believed AI promotes talent acquisition by offering numerous opportunities (38.7%) that include identifying the best candidates (18.7%) and various benefits (33.2%) to the company in the form of reducing time and cost (16.1%) leading to greater effectiveness.

Jesse Stanchak (2024) explained that the candidate involvement has been completely transformed by the introduction of chatbots, programmatic advertising, and AI-driven setting up tools, which offer instant access to information, generate tailored communications, and guarantee prompt evaluation. Due to positive understanding the applicant becomes dedicated employer and enhance greater talent workforce, this strategy aids both the employer and the applicant.As AI models become more capable, the future will present even more significant opportunities. Business executives need to get ready for a hiring environment where human-machine collaboration is the norm as AI's role continues to grow.

Abhishek Kaushik (2025) stated that identifying hiring strategies is a crucial choice for any organization. To accomplish organizational goals, it entails finding, luring, and hiring people. The process of acquiring talent is influenced by many different factors.These consist of identifying the best employees, getting input, and assessing organizational tactics. Pre-employment assessments, candidate sourcing and screening, resume and application analysis, suitable to culture, and candidate achievement forecast are few of the tasks that AI may be able to assist with.Recruiters are more effective and have more time for larger objectives as AI takes the responsibility of talent acquisition. AI-powered monitoring tools can cut time by 75%, contended by Talent Board and Phenom.

Objectives

To learn Algorithmic management within the hiring process in organizations

To Explore increase in operational efficiency with AI recruitment

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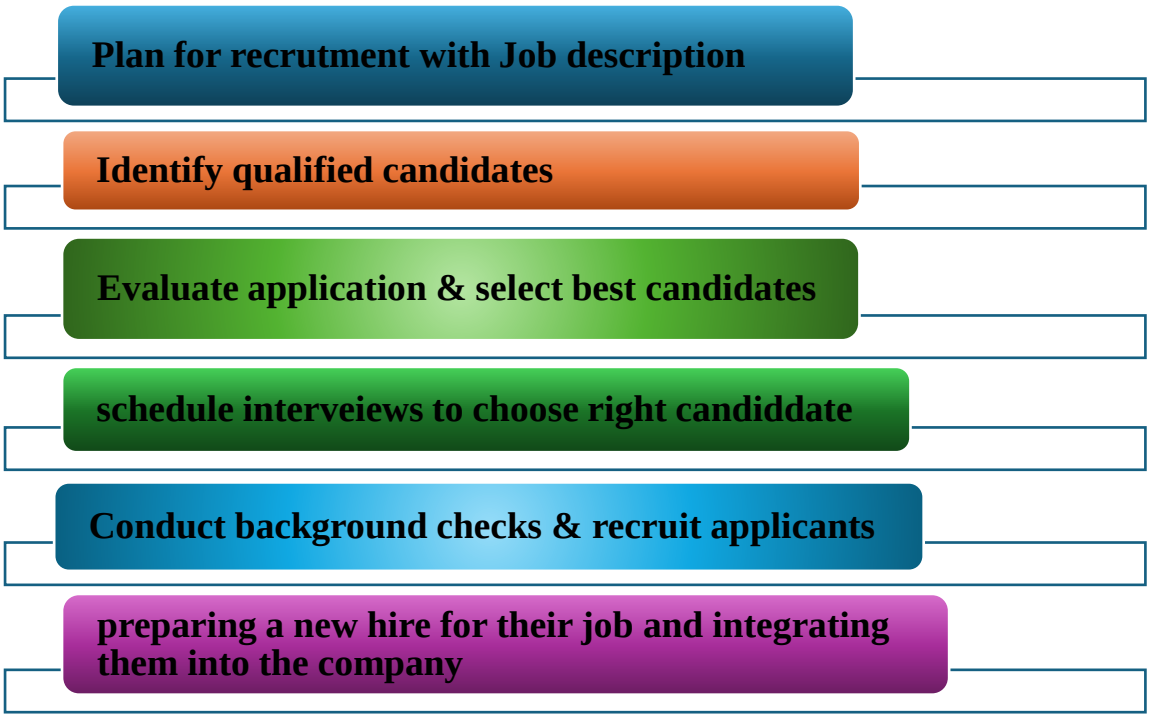
Algorithmic management in Recruiting

Organisations use ambidexterity theory and the algorithmic management literature to examine the complex interplay between relational and transactional competencies during talent acquisition.Using computer algorithms and artificial intelligence company manages staff members is known as algorithmic management. This approach essentially automates a significant portion of the decision-making process by gathering and evaluating enormous volumes of data about worker performance, work habits, and other pertinent metrics in order to maximize workforce management and operations.A company's ability to simultaneously pursue both investigating to look for new possibilities and inventions and oppression to maximize core competencies is known as ambidexterity theory in organizational management.This is essentially balancing the need for innovation and effectiveness to accomplish long-term victory; the analogy comes from the actual meaning of ambidextrous, which is the ability to use both hands evenly to various tasks successfully(Wilson, J et al-12018). A major benefit of digital recruitment is that it expands generates a lot of applicant pool and of job applications obtained. AI-powered talent acquisition requires a balance between strategic thinking and flexibility to successfully apply cost-effective techniques.

Figure 1 Stages in Recruitment process



Source: Sandeep Jain (2024)

In the first stage prepare a list for different job vacancies. There are different sources from which AI select qualified persons for recruitment. All the applications will be scrutinised to choose the suitable candidates for the organisation. AI will short list the applicants and then call for interview to discuss with them company requirements and their satisfaction with pay and designation. Before selecting the candidates, their background will be checked with their previous companies regarding the applicant's dedication and trust worthiness. After recruiting candidates for the job, orientation program will be conducted to acquaint them about the company. Artificial Intelligence (AI) refers to self-governing systems that are intended to facilitate quasi-human communication in order to facilitate additional algorithmic-based functions. AI replaces the monotonous work that human recruiters have

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historically done and helps HR managers and leaders to effectively fascinate, hold, and encourage talented HRsto concentrate on other critical job for the success of the business.

Matching operational and relational aspects is essential to attain a tactical fit, though some earlier research has established the significance of operational and relational abilities as the primary factors for customer fulfilment(Zhao and Stank (2003).Without direct human involvement, an algorithm uses statistical models to make decisions on its own. The ability to process and learn from large volumes of data on its own represents a dramatic change in how organizations make decisions, especially in managerial and human resources roles.

Algorithmic management supports organizational decisions by using prescriptive, predictive, and descriptive algorithms. Prescriptive algorithms suggest activities grounded on simulations and scenario analysis; descriptive algorithms process and sort data to help observe metrics like execution and character; and predictive algorithms predictprobableresults, which support in enrolment and selection.These algorithms have an impact on employment demands, communal dynamics, job nature, and information prerequisites. The results may have an impact on performance, inspiration, and welfare.AI reveals novel approaches to hiring, like using chatbots to interact more dynamically and individually with applicants. By investigating new market opportunities and comprehending consumer needs, this element supports the pursuit of disruptive innovations in practices by foreseeing possible desires and creating new demand.

Ambidexterity allows businesses to accomplish both exploration and exploitation.Prior research has demonstrated the advantages of this achievement for firm longevity and business performance(Neil Turner, et al -2013). Exploitation and exploration are disconnected in time in temporal ambidexterity, where the organization changes between the two main themes.According to structural ambidexterity necessitates that these modes be kept apart, with one organizational unit concentrating on exploration and another on exploitation, both of which must be united at the senior management level.In contextual ambidexterity at the business unit level occurs when people make decisions that permit both integration where consistent business operations working towards a common goal – exploitation and flexibility where the ability to transform the these as permitted by the work environment – exploration.In the context of talent acquisition, the theory of ambidexterity proposes that companies should actively seek out and hire new talent with a variety of skills to adapt to future needs - exploration while also concentrating on effectively managing their current workforce - exploitation.This way, hiring practices can strike an equilibrium between steadiness and agility, allowing businesses to stay competitive in the market.Ambidexterity highlights the necessity of striking a balance between exploitation, filling open positions with competent applicants through established recruitment procedures and exploration, looking for fresh talent, creative recruitment strategies, and a variety of skill sets.By using an ambidextrous strategy, businesses can adapt to shifting market conditions and industry trends by actively seeking out new hires and streamlining existing hiring procedures.

AI recruitment Enhance operational efficiency

It has been demonstrated that integrating technology like artificial intelligence (AI) into electronic human resource management enhances productivity, service delivery, uniformity, and organizational image while freeing up managers and HR to concentrate on more static tasks.However, algorithmic management's propensity to emphasize operational performance at the expense of interpersonal relationships may be detrimental ((Wieland et al -2013).Interactions that depend on cooperation, communication, and integration are illustrations of relational competencies, it also embraces coordination, cooperation, capability, and connection are components of relational competencies.Recruitment entails a screening procedure to identify and weed out job seekers who

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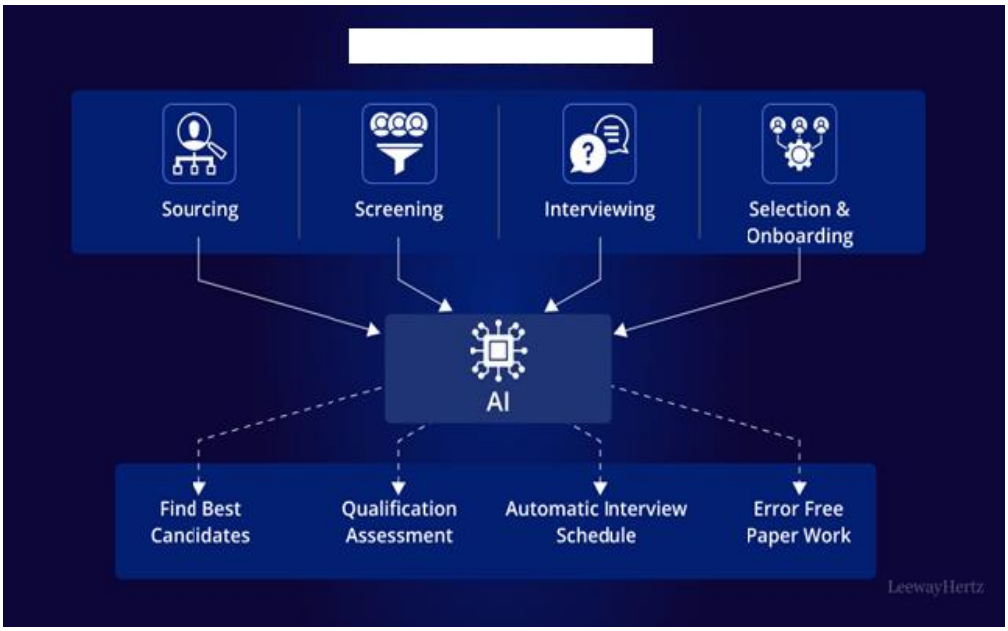
don't meet the criteria, to match the skills needed by reviewing resumes, and shortlist the most qualified applicants (Singh et al., 2010).

Figure 2 AI in Recruitment



Source: Akash Takyar (2024)

AI can recognise employees who are at risk of dropping through predictive analytics, allowing for assertive initiatives. Employee engagement and dedication are maintained through customized development plans that are cantered on each worker's unique skills and career goals. Chatbots and virtual assistants powered by AI enable ongoing feedback, assisting businesses in resolving issues and enhancing employee satisfaction.The business activity is intended with various functions, including production process that interact with customers and administrative assistance, as a result of the varied multidisciplinary framework (Bititci et al., 2011). For the main business process, both are functional. However, the latter does not deal directly with customers. Human resource management (HRM), the overarching division of recruitment, is considered the support process. The business process is separated into core (primary) and supportive (secondary).

AI has drastically changed the landscape of talent acquisition, making the hiring process quicker, more effective, and more impartial. AI technology helps businesses find the right talent more efficiently by restructuring these processes and utilizing data-driven insights. AI-powered technologies such as machine learning and natural language processing enable recruiters to automatically scan and evaluate resumes in order to create a shortlist of applicants who meet particular job requirements (Ranjan Mukhopadhyay (2024). While planning for workers, AI detect hiring requirements, frame talent acquisition tactic, boss branding, variety and insertion considered. Then start sourcing and scanning by verifying the application, check if they will be willing for the movement of positions within a company, assessing probable applicants to check and find out they have required qualifications for an exact role.Artificial intelligence assists with interview planning, screening, validating, answering frequently asked questions, evaluating experience feedback, and replying to not recruited candidates (Nawaz and Gomes, 2020).

AI start evaluating and interview the screened candidates, prepare some questions to conduct interview. AI examine whether the candidate will be suitable for the job. In the next stage after the interview is conducted, they finally accept and hand over the applicant offer letter mentioning job

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position, specify salary that is fixed, reimbursements, and date of joining, and check with them whether they agree to join the company. AI verifies a candidate's identity and credentials are correct after an interview by looking into their education, criminal history, work history, and other pertinent information.This ensures that the candidate is a good fit for the position and confirms the information on their application and resume.AI recruitment selection has the potential to save a company money through lower workforce costs and lower recruitment cost, reducing employee turnover (Buckley et al., 2004).

Background check verified after the interview to confirm that the data a candidate has submitted is accurate.Depending on the job, these could include driving records, educational certificates, criminal background checks, previous employment verification, and occasionally even credit history.The procedure of integrating new hires into a company is known as employee onboarding, referred to as organizational socialization or employee orientation.Finally, AI observes all legislative requirements fulfilled when employing new staff, making sure that the process of finding, luring, and choosing applicants is carried out impartially and without bias, and abiding by rules such as Equal Employment Opportunity (EEO) strategies and data privacy regulations at every stage of the talent acquisition process.Enhancing business activities and structures to lower operating costs while preserving or increasing productivity is known as operational efficiency.Organizations can use software solutions to optimize their operations by implementing strategies like process mapping, and automation. By bringing creative ideas, reasoning skills, issue solving abilities, and a positive work ethic, talented employees can greatly enhance the operational efficiency. In order to find the appropriate candidates, AI can assist in eliminating unconscious bias from conventional selection and evaluation processes by eliminating factors like names, schools attended, gender, age, and race (Upadhyay and Khandelwal, 2018). They can also detect and execute process improvements, optimize work processes, maximize resource distribution, and work for non-stop changes inside an organization, which finally results in increased productivity and decreased waste.Finding a company's problem areas and take corrective actions, necessitates to increase productivity and increasing operational efficiency. A business needs a plan and a thorough knowledge of its operations in order to be successful(Mohammed A. Aldoghan et al -2023). Due to its ability to digitize time-taking activities like sourcing, screening, and texting, chatbots are among the Ai systems used for talent acquisition that have been used to digitise 80% of all "Top of Funnel" recruiting operations (Balachandar and Kulkarni, 2018).

Research methodology

The international scientific community has widely acknowledged the methodology of employing secondary data analysis in scientific research. Secondary data taken from their annual reports that includes numerical data taken from website. Data resources are now simpler to access for research, due to advanced informational technologies.It is quantitative research where operational efficiency is calculated, applying financial ratios.

Operational Efficiency ratio

The operational efficiency ratio is calculated by applying the inventory turnover ratio, or by adding the cost of goods sold (COGS) and operating expenses and then dividing the total by the net sales of the business.A company value is lesser enhancing its operational efficiency performance if the value is less or decreasing(Alice Gomstyn et al- 2024). When operational efficiency ratio is higher, performance of the company is high. Data taken from annual reports of Tata motors company to calculate the financial ratios.

$$\text{Operational efficiency ratio} = \frac{\text{Operating expenses + CGS}}{\text{Net sales}} \times 100$$

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Table 1- Operational efficiency

Year	Operating expense	Cost of goods sold	Net Sales	Operational efficiency
2020	11,00000	15,00000	26,00000	100%
2021	9,50000	14,50000	25,00000	96%
2022	11,12000	11,50000	28,00000	80%
2023	12,80000	20,80000	35,00000	96%
2024	16,70000	24,00000	45,00000	91%

Source: https://stockanalysis.com/

It is observed from the above table that operational efficiency of Tata Motors ltd is in good position, indicating that operational efficiency of the firm. As the company is in a position to control the operating expenses and cost of goods sold, their operating efficiency has increased. They also use AI in recruitment so that they are able to select skilled people for the right position, which is the cause for increasing sales, reducing operating cost and wastages in Tata Motors ltd.

Inventory turnover ratio

One indicator to check efficient use of inventory, stock turnover ratio calculated. High inventory turnover ratio indicates strong sales and efficient management. A low rate, means poor sales, obsolescence, or overstocking.For measuring how fast the company sells its stock, check whether they hold excess inventory, or less inventory, this ratio is used. A higher turnover ratio usually signifies better inventory management and more effective sales generation by not stocking much inventory in the company.

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

Table 2 Stock turnover ratio

Year	CGS	Average Inventory	Stock turnover ratio
2020	15,00000	2,67000	5.6
2021	14,50000	2,60000	5.5
2022	11,50000	12,50000	0.9
2023	20,80000	18,90000	1.1
2024	24,00000	6,15000	3.9

Source: www.moneycontrol.com

The above table indicates Tata motors inventory turnover which is high, and low for some years which means the company does not have effective control over inventory in stock room. Hence the company must increase stock turnover so that company can sell and replace inventoryin short duration. It will reduce inventory cost of the company, and businesses can increase their profitability by lowering operating costs through improved operational efficiency. High inventory turnover means it sell goods quicker.

Gross Profit ratio

$$\text{GP ratio} = \frac{\text{Gross profit}}{\text{sales}} * 100$$

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Table 3 Tata Motors ltd Gross Profit ratio

Year	GP	Sales	GP ratio
2020	11,10200	26,00000	42.7
2021	10,45000	25,00000	41.8
2022	11,42,400	28,00000	40.8
2023	13,96500	35,00000	39.9
2024	19,71000	45,00000	43.8

Source: Screener.in

A financial measurement called the gross profit ratio (GPR) gauges how much money a business earns from its sales. It's a crucial sign of a business's productivity and financial success. It plays a significant role in determining the operational efficiency and financial performance of the company. When Gross profit ratio is higher, it specifies good operational efficiency of the company. Tata Motors have high GP ratio, that specify the company's profitability and operational efficiency is sound.Tata Motors taken as example to analyse operational efficiency by the researcher, as it stands in 6th position among the best organisations in India. Tata motors have a good sales record with consistent demand for their product and earn decent returns. The company's operational efficiency ratio, GP and stock turnover ratio has proved good control and efficient use of AI to improve their performance.

Table 4 Comparative data of top 10 companies in India

Company	**P/E**	**Sales-Qtr-Cr**	**ROCE**	**EBIT-cr**	**ROE**
Reliance	23.5	229986	9.6	97463	8.7
LIC	10.8	203751	72.9	25303	80.8
IOCL	16.5	194014	21.1	34151	16.3
ONGC	7.2	166096	18.4	55838	13.3
SBI	7.7	124653	6.2	239376	13
Tata motors	7.2	113575	20.1	12841	5.8
BPCL	7.3	113165	32.1	18691	23
HPCL	10.4	110607	21.2	8783	16.7
HDFC Bank	19	85040	7.7	136276	16.8
Rajesh exports	122.8	66923	3.2	1142	7.9

Source: www.screener.in

Investors can also use the **P/E ratio** to compare the market value of a stock to the earnings of the company. In other words, based on a stock's historical or projected earnings, the P/E ratio indicates what the market is willing to pay for it today.An important measure for evaluating a company's financial health and investment potential is the Return on Capital Employed (**ROCE**) ratio, which shows how well a business uses its capital to make profits. This enables investors to compare businesses in the same industry and identify those that are efficiently deploying their resources to produce higher returns.The profitability of a company in connection to shareholder equity is assessed by return on equity, or **ROE**. A greater return on equity (ROE) signifies that management is more successful in producing growth and income from the capital that shareholders have invested.For many businesses, enhancing energy usage is a critical component of operational efficiency, and AI is playing a significant role in this regard.

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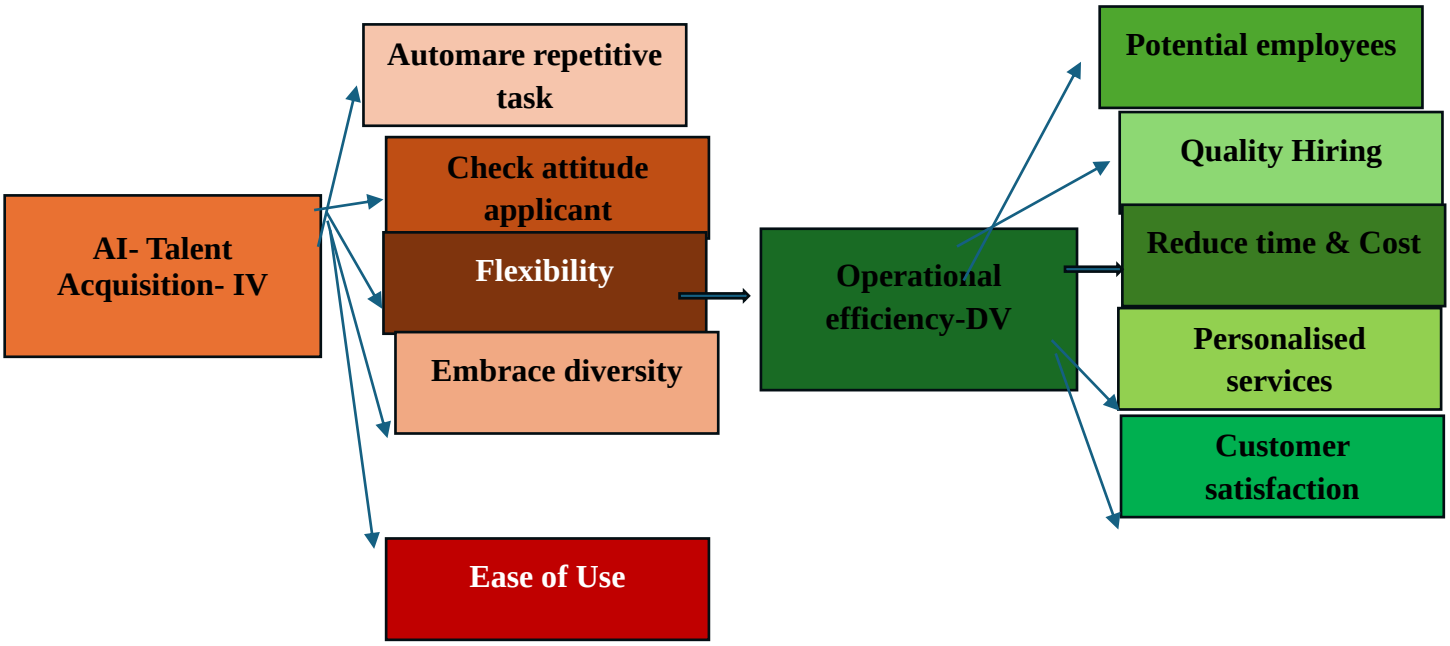
Conceptual model of the study



Operational efficiency of the organisation is a dependent variable. Efficiency enhancement depends on some factors like potential and quality employees recruited by AI, who in turn reduce operation time and cost of manufacturing. AI supports to do personalised services for the organisation and satisfy customers. The independent variable influencing operational efficiency is Talent acquisition by AI. AI check the attitude of employees whether they will fit in for the position. As repetitive work is monotonous to workers, it is automated with Artificial intelligence. Employees are selected from various places to diversify the workforce with multiple talents and they are trained to use AI and make them feel ease of use of technology.

Findings

The findings of research indicated a cautious stance, warning against placing too much focus on operational performance that is only influenced by algorithmic management. Such a limited focus might unintentionally overlook the importance of relational aspects, which include skills like communication, integration, and values that are learned through interpersonal interactions at work.AI's involvement in talent acquisition can also improve managers' capacity to make knowledgeable decisions, streamline procedures, and effectively handle obstacles.Managers have time to concentrate in framing diplomatic and accurate management practices, to increase the operational efficiency of the organisation.AI has a significant impact on hiring practices, which shows up in a number of ways, including increased accuracy and efficiency throughout the hiring process. By performing thorough data analysis and enabling data-driven candidate selection, AI improves the hiring process.To put it another way, AI in hiring enables companies to interact with applicants right away and avoid losing out a qualified applicant. Technology's aesthetics, functionality, liveliness, and service quality contribute to its positive pre-employment bonding (van Esch et al., 2019). By automating time-consuming routine jobs, artificial intelligence (AI) can increase productivity. AI-powered solutions can complete tasks like data entry and appointment scheduling faster and more precisely than humans, freeing up time for managers to do more intricate, higher - value tasks.AI's Revolutionary Impact on Talent Management is by increasing productivity, engagement, and employee satisfaction. Artificial intelligence has enhanced performance by 27%, raise satisfaction by 24%, and increase staff retention by 51%, according to CIOs and leader statistics.The transactional

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and relational perspectives (Stone et al., 2015) can be used to analyses earlier research on the hiring process. The aforementioned is linked to the administrative process, while the current addresses the human element. This paper starts with the premise that both transactional and relational aspects are important in the field of human resources (HR) research.A major benefit of digital recruitment is that it expands the applicant pool and increases the volume of job applications received (Wilson and Daugherty, 2018). However, this increment does not always translate into better applicants.

Suggestions

AI has to strengthen or even disseminate human biases which is one of the most tenaciousproblems. Care must be taken to guarantee that AI recruitment tools do not show favouritism against candidates grounded on gender, race, or any other threatened characteristic, whether in the algorithm development phase or through the datasets used.Businesses can give goods at economical price to customers by passing on cost savings from increased operational efficiency.Biased hiring decisions and inefficient hiring can result from unpredictable interviews.Embracing AI to find novel approaches in hiring, like using chatbots to interact with applicants more dynamically and individually, is part of exploration strategies. By investigating new market possibilities and comprehending consumer needs, this element supports the pursuit of disruptive technologies in practices, foreseeing possible desires and creating new demand (Clauss et al., 2021). Regulate interviews via AI tools that create role-precise questions and grading models, guaranteeing each candidate is evaluated fairly and on the similar norms.Decision-making can be decelerated by employing opponents' poor communication. Apply interactive staffing portals, and hiring managers to score candidates, exchange feedback, and monitor progress in real time(Team Omind (2024). It is better for the organisations to use intelligent systems like AI that reduces the need for human intervention by handling tasks like interview scheduling, real-time response, and interaction personalization with ease, especially as younger generations increasingly favour bot interactions.The accuracy and applicability of AI-driven analyses in the hiring process can be improved, which can adapt huge language models to the subtleties of HR terminology and candidate data. AI systems must smoothly mesh with current HR technology infrastructures, to improve operational effectiveness and talent acquisition decision-making.We contend that the recent spread of artificial intelligence (AI) in businesses is changing not just organizational structure but also hiring procedures (Meijerink et al., 2021).Talent acquisition, whether using AI or not, is a crucial aspect of HR development and management. This function needs to strike a balance between being strategic and adaptable to implement cost-efficient methods effectively (Lepak and Snell, 1998).

Conclusion

From the standpoint of AI as a communicator (Hepp, 2020; Guzman and Lewis, 2020), the relational element can be seen, where the chatbot serves as an extension of the company's communication with the jobseekers. Furthermore, AI in hiring reduces the need for human intervention in administrative and analytical duties. AI hiring algorithms shortlist the best candidates after swiftly reviewing resumes. This simplified hiring procedure demonstrates effective recruiting by minimising time, lowering hiring expenses, and improving the candidate experience. To prevent the exclusion of competent applicants, configure AI filters to prioritize experience and skills above job titles or degrees(Pooja Uniyal (2025).AI can be used to find talent from a variety of backgrounds by eliminating pointless filters that restrict search results (Emmanuel Acquah (2024).There is 40% increase in operational excellence, credit goes to AI, which is enabling them to boost productivity. Perhaps the most obvious and immediate way AI improves operational efficiency is through process automation. AI can forecast when employees will leave, enabling alternative arrangements, by evaluating sensor data and past performance.Bots are used in robotic process automation (RPA) to simulate human behaviour when handling laborious questions and activities. Natural language processing-enabled chatbots assist applicants, respond to inquiries, and offer updates, increasing efficiency and engagement. The study highlighted the importance of using AI in talent acquisition to

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improve their operational efficiency.According to Slack and Brandon-Jones (2018), functionality is the degree to which a product performs its intended function. It implies that the AI tool is anticipated to accomplish tasks that are typically completed by human recruiters, such as reading resumes (as opposed to AI CV parsing) and conducting interviews (as a chatbot interview). It serves the same purpose as the great fight question. It appears more contemporary and chiller. The screening question might provide a pleasant experience for the candidate.In particular, e-recruiting usually seeks to boost operating efficiency, including lowering costs, reducing the recruitment cycle, and improving candidate efficiency (McManus and Ferguson, 2003).

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