



A Study of Role of Applicant Tracking System in Candidate Screening: A Comparison with Human Decision Making in Companies

Rahashya Humane

Student, MBA Department

Dhole Patil College of Engineering, Pune

Dr. Vidya Bhandwalkar

Project guide, MBA Department

Dhole Patil College of Engineering, Pune

Author Email:rahashyahumane123@gmail.com

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Abstract—

The growing adoption of digital technologies in recruitment has significantly transformed candidate screening processes. One of the most widely used tools is the Applicant Tracking System (ATS), which automates resume screening and improves efficiency. This study aims to examine the role of ATS in recruitment and compare its effectiveness with human decision-making. A descriptive research design was used, and primary data was collected through a structured questionnaire from 30 respondents. The study analyzes key factors such as efficiency, accuracy, bias, and overall effectiveness in candidate screening. The findings indicate that ATS improves speed and consistency in handling large volumes of applications, while human decision-making is more effective in evaluating qualitative aspects such as communication skills and cultural fit. However, ATS may overlook suitable candidates due to keyword-based filtering, and human judgment may introduce bias. The study concludes that a hybrid approach combining ATS and human evaluation leads to more effective recruitment outcomes.

Keywords-

Applicant Tracking System (ATS); Recruitment; Human Decision-Making; Candidate Screening; E-Recruitment; HR Technology



I. INTRODUCTION

In recent years, the recruitment function has undergone significant transformation due to the advancement of digital technologies. Organizations are increasingly adopting automated systems to manage large volumes of job applications efficiently. One such innovation is the Applicant Tracking System (ATS), which enables recruiters to filter resumes, shortlist candidates, and manage recruitment data systematically. ATS helps reduce time, cost, and manual effort involved in traditional hiring processes.

Despite the advantages of ATS, human decision-making continues to play a critical role in recruitment. Recruiters evaluate candidates based on qualitative factors such as interpersonal skills, adaptability, and cultural fit, which are difficult for automated systems to assess. However, human judgment can be influenced by bias and inconsistency.

This study aims to analyze the role of ATS in candidate screening and compare its effectiveness with human decision-making. It focuses on identifying the strengths and limitations of both approaches and determining the most effective recruitment strategy.

II. LITERATURE REVIEW

The integration of technology in recruitment has been widely studied by researchers.

Studies indicate that ATS significantly improves recruitment efficiency by automating resume screening and reducing time-to-hire.

Research by Velankar and Khuspure shows that ATS minimizes human intervention and enhances cost-effectiveness. Similarly, Chavan et al. highlight the role of advanced technologies such as Natural Language Processing (NLP) in improving candidate matching.

However, several studies point out limitations of ATS, including its reliance on keyword-based filtering and inability to assess hidden skills or candidate potential.

On the other hand, human decision-making is considered more effective in evaluating soft skills, creativity, and cultural fit. However, it is often criticized for being time-consuming and prone to bias.

Overall, existing literature suggests that while ATS enhances efficiency, it cannot fully replace human judgment, highlighting the need for a balanced approach.

III. METHODOLOGY

This study adopts a descriptive research design to examine the effectiveness of ATS and human decision-making in recruitment.

Primary data was collected through a structured questionnaire distributed to working professionals. A total of 30 respondents participated in the study. The sample included individuals with varying levels of work experience. A convenience sampling method was used due to time and accessibility constraints.

The questionnaire consisted of multiple-choice and close-ended questions to capture responses related to awareness, efficiency, accuracy, and preference between ATS and human decision-making.

Secondary data was collected from research papers, journals, and online sources. The collected data was analyzed using percentage analysis and interpreted through tables and charts.

IV. RESULTS AND DISCUSSION

The findings of the study indicate that ATS plays a significant role in improving recruitment efficiency. A majority of respondents (73.3%) agreed that ATS helps in handling large volumes of applications effectively.

Around 70% of respondents believe that ATS accurately shortlists candidates based on job requirements, although some expressed concerns regarding its limitations.

A considerable proportion of respondents (43.3%) agreed that ATS fails to assess candidate potential beyond resume content. This highlights a key limitation of automated systems.



Human decision-making was perceived as more effective in evaluating skills and talents, with 56.7% respondents supporting this view. However, 40% respondents acknowledged that human judgment can be biased.

The most significant finding is that 46.7% respondents preferred a combination of ATS and human decision-making, indicating strong support for a hybrid approach.

Overall, the results suggest that ATS improves efficiency but lacks qualitative assessment, while human judgment provides depth but may lack consistency.

V. CONCLUSION

The study concludes that Applicant Tracking Systems have become an essential tool in modern recruitment due to their ability to improve efficiency and streamline candidate screening. However, ATS has limitations in evaluating qualitative aspects and may overlook suitable candidates.

Human decision-making remains crucial for assessing soft skills and overall candidate suitability but is prone to bias and inconsistency.

Therefore, the most effective recruitment strategy is a hybrid approach that combines ATS for initial screening with human evaluation for final decision-making. This approach ensures better accuracy, fairness, and overall recruitment effectiveness.

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