



# The Role of Artificial Intelligence in Recruitment and Selection Process of the Airline Industry

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## ABSTRACT

Artificial Intelligence (AI) is rapidly transforming Human Resource Management practices across industries, particularly in recruitment and selection processes. The airline industry requires highly skilled employees and efficient hiring systems due to strict safety regulations, service quality expectations, and operational complexity. Traditional recruitment methods are often time-consuming, costly, and dependent on manual decision-making. AI-based recruitment technologies such as Applicant Tracking Systems (ATS), chatbots, predictive analytics, and automated interview platforms help airlines improve hiring speed, reduce bias, and enhance candidate experience. This research paper examines the role of Artificial Intelligence in recruitment and selection within the airline industry using secondary data sources. The study highlights benefits, challenges, applications, and future implications of AI-based hiring systems and provides recommendations for effective implementation.

**Keywords:** Artificial Intelligence, Recruitment, Selection Process, Airline Industry, HR Analytics, Talent Acquisition



## 1. INTRODUCTION

Human Resource Management plays an important role in organizational success by ensuring the availability of skilled and competent employees. In the airline industry, recruitment and selection are critical processes because employees directly influence operational safety, customer satisfaction, and service efficiency.

With technological advancement, Artificial Intelligence (AI) has emerged as a powerful tool that supports HR professionals in improving recruitment accuracy and efficiency. Airlines are increasingly adopting AI-based recruitment systems such as resume screening automation, chatbot communication, predictive hiring analytics, and video interview evaluation platforms.

This research paper focuses on analyzing the role of Artificial Intelligence in improving recruitment and selection practices in the airline industry and examines its advantages, limitations, and future scope.

## 2. REVIEW OF LITERATURE

- Armstrong (2020) explained that modern HRM practices increasingly depend on digital tools for improving workforce planning and talent acquisition efficiency.
- Dessler (2021) highlighted that recruitment technologies such as Applicant Tracking Systems help organizations reduce hiring time and improve candidate filtering accuracy.
- Upadhyay and Khandelwal (2018) stated that Artificial Intelligence improves recruitment efficiency by automating resume screening and predicting employee performance using analytics.
- Black and van Esch (2020) identified that AI-driven recruitment systems enhance candidate experience and reduce hiring bias through structured evaluation methods.

These studies indicate that Artificial Intelligence plays a significant role in improving recruitment effectiveness across industries including aviation.

## 3. OBJECTIVES OF THE STUDY

1. To understand the concept of Artificial Intelligence in recruitment.
2. To examine recruitment and selection practices in the airline industry.
3. To analyze the role of AI in improving recruitment efficiency.
4. To identify advantages and challenges of AI-based recruitment systems.
5. To provide suggestions for effective implementation of AI in airline HR practices.

## 4. RESEARCH HYPOTHESIS

H0: Artificial Intelligence does not significantly improve recruitment and selection efficiency in the airline industry.

H1: Artificial Intelligence significantly improves recruitment and selection efficiency in the airline industry.



## 5. RESEARCH METHODOLOGY

This research study is based on secondary data collected from books, research journals, airline industry reports, academic publications, and online databases related to Artificial Intelligence and Human Resource Management.

The study follows a descriptive research design to analyze the role of Artificial Intelligence in recruitment and selection processes in the airline industry.

## 6. SCOPE OF THE STUDY

The scope of this research is limited to analyzing the role of Artificial Intelligence in recruitment and selection processes within the airline industry. The study focuses on AI-based tools such as resume screening software, chatbots, predictive analytics systems, and automated interview platforms used in hiring practices.

## 7. LIMITATION OF THE STUDY

The study is based only on secondary data sources such as journals, books, and websites. Lack of primary data such as surveys or interviews with airline HR professionals is a limitation of this research.

## ANALYSIS AND INTERPRETATION

### CONCEPT OF ARTIFICIAL INTELLIGENCE IN RECRUITMENT

Artificial Intelligence refers to the simulation of human intelligence by machines that are capable of learning, reasoning, decision-making, and problem-solving. In recruitment, AI technologies help automate repetitive HR activities and improve hiring accuracy.

Major AI-based recruitment tools include:

- Resume screening software
- Chatbots for candidate communication
- Video interview evaluation platforms
- Predictive analytics systems
- Applicant Tracking Systems (ATS)

These tools help organizations select suitable candidates efficiently and effectively.

### RECRUITMENT AND SELECTION PROCESS IN THE AIRLINE INDUSTRY

The airline industry follows a structured recruitment and selection process to ensure hiring of competent employees. The major steps include:

1. Manpower planning
2. Job analysis and job description preparation
3. Job advertisement



4. Resume screening
5. Aptitudinal and technical testing
6. Personal interviews
7. Medical examination
8. Background verification
9. Final selection and training

Due to safety-sensitive operations, airlines require high precision and reliability in employee selection.

#### ROLE OF ARTIFICIAL INTELLIGENCE IN AIRLINE RECRUITMENT

- Artificial Intelligence plays an important role in improving recruitment practices in the airline industry.

- Automated Resume Screening

AI systems scan large numbers of resumes quickly and shortlist candidates according to job requirements.

- Chatbots for Candidate Interaction

AI chatbots provide instant responses to candidate queries regarding eligibility, job roles, and application status.

- AI-Based Video Interview Analysis

AI-enabled interview platforms evaluate communication skills, facial expressions, and confidence levels of candidates.

- Predictive Analytics in Hiring

Predictive analytics helps HR managers forecast candidate performance and retention probability using historical recruitment data.

- Reduction of Recruitment Bias

AI systems reduce human bias by evaluating candidates objectively based on skills and qualifications.

#### ADVANTAGES OF AI IN AIRLINE RECRUITMENT

- Faster recruitment process
- Reduced hiring costs
- Improved screening accuracy
- Better candidate experience
- Data-driven decision making
- Reduction in human bias
- Improved workforce quality

#### CHALLENGES OF AI IN RECRUITMENT

- High implementation cost
- Data privacy concerns
- Dependence on technology
- Risk of algorithmic bias



- Requirement of trained HR professionals

## APPLICATION OF AI IN INDIAN AIRLINE INDUSTRY RECRUITMENT

- Air India uses digital recruitment platforms and automated screening systems to manage large-scale hiring efficiently.
- IndiGo Airlines utilizes structured online assessment platforms and digital interview tools for evaluating cabin crew and ground staff candidates.
- Vistara Airlines applies technology-supported recruitment systems for enhancing candidate experience through online applications and structured interview evaluation processes.

The adoption of AI-supported recruitment tools by Indian airlines reflects the growing importance of technology-driven HR practices in the aviation sector.

## FINDINGS OF THE STUDY

The study reveals that Artificial Intelligence significantly improves recruitment efficiency in the airline industry. It reduces manual workload, enhances candidate experience, and supports data-driven hiring decisions. However, proper monitoring and ethical implementation are necessary for effective utilization of AI systems.

## SUGGESTIONS AND RECOMMENDATIONS

- Airlines should invest in advanced AI recruitment tools.
- HR professionals should be trained in AI technologies.
- Data privacy policies should be strengthened.
- AI systems should be regularly monitored for fairness.
- Human supervision should remain part of the final selection process.

## CONCLUSION

Artificial Intelligence is transforming recruitment and selection processes in the airline industry by improving efficiency, transparency, and accuracy. AI tools support HR professionals in selecting suitable candidates quickly and effectively. Although challenges such as privacy risks and implementation costs exist, the benefits of AI adoption are significant. With proper planning and ethical implementation, Artificial Intelligence will play a major role in shaping the future of recruitment in the airline industry.

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