



THE ROLE OF ARTIFICIAL INTELLIGENCE IN SHAPING TOURISM JOBS IN INDIA

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Abstract:

The Indian tourism and hospitality sector is currently undergoing a radical digital transformation driven by the rapid integration of Artificial Intelligence (AI). This research article explores the multifaceted role of AI in shaping tourism jobs in India, focusing on its impact on job transformation, skill requirements, and overall workforce efficiency. The study is guided by four primary objectives: to examine how AI redefines traditional job roles, to identify the specific opportunities and challenges associated with AI adoption, to assess improvements in service quality and productivity, and to evaluate the industry and policy responses toward workforce reskilling. Adopting a descriptive and analytical research design, the study utilizes primary data collected through a structured questionnaire from professionals across the Indian tourism landscape. The findings reveal that while AI is effectively automating routine administrative and repetitive tasks, it is simultaneously creating a demand for a new set of high-level skills, particularly in digital literacy and data management. Approximately 80% of respondents reported significant improvements in customer service speed and a reduction in manual errors due to AI tools like chatbots and automated booking systems. However, the study identifies a critical "training gap," with 45% of the workforce citing a lack of technical expertise as a major barrier to AI adoption. Furthermore, the data suggests that AI is not a threat to total employment but a catalyst for "job enhancement," shifting the human focus toward more personalized and complex guest interactions. The research concludes that the future of Indian tourism employment depends on a symbiotic "Hybrid Model" where technological efficiency is balanced with human empathy. To ensure a smooth transition, the study recommends urgent industry-wide reskilling programs and proactive government policy frameworks like 'Digital India' to empower the workforce. Ultimately, AI will not replace the human touch in Indian hospitality but will redefine it for a more efficient, tech-savvy future.

Keywords: Artificial Intelligence, Tourism Jobs, India, Skill Transformation, Workforce Efficiency, Automation, Reskilling.

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Introduction:

We all are bare eye substantiation to this technological world, how the world has been driven towards the advancement of technology. The invention to new technologies always created a world revolution in colourful diligence across the globe. Artificial Intelligence (AI) is one of the most brilliant inventions of our technology- driven age, revolutionising different diligence throughout the world. Artificial Intel licence (AI) is the development of computer systems that can perform tasks and conditioning that need mortal intelligence. (Russell and Nerving, 2016, p. 4). The most effective and advanced technology till date

remain the Artificial Intelligence (AI), it the power to change the whole world entirely and begin a new period of technologies. AI is appertained to that advanced computer system which works with mortal intelligence in order to perform the tasks or conditioning. (Patel, 2021). In the time 1956, the first appearance of Artificial Intelligence was chased by John McCarthy in his Dartmouth Research Project, since also over times and times AI was extemporized and has changed the traditional work of this world. With passing time, gradational progress has been done in the field of technology and therefore its significance has been increased, by the 1980s. The world was witnessing the

progress on the field of AI by the 1990s which was worth in similar development. (Viglia, Furlan and Ladrón-de-Guevara, 2014) Because of the growth of advance technologies the masterminds were suitable to get access to the large data and was successful in erecting the robots, which was veritably effective exploration. therefore, the conception of AI has grown to a implicit since back also and now in this 21st century Artificial Intelligence has formerly reached to its peak, as a result it's now involved in every assiduity similar as health- care, education, marketing, public relation, small business and indeed in tourism sector.(How Artificial Intelligence(AI) is Changing the Travel Industry, 2021) 21st century has come the period of digitization, and it has been seen that the growth in the tourism assiduity is incredibly adding day by day, according to the perceptivity over 10.93 million foreign excursionists arrived in India in last- to-last time(i.e. 2019) and the growth in constantly adding at much advanced rate.(How Mobile Influences trip Decision Making in Ca not- stay- to- Explore Moments, 2021) Technology is one of the important reasons that the assiduity is having boosted performance and the quality service, AI has fully changed the tourism world and the traditional hospitality, in the dynamic request it has gained a competitive advantage. It seems that the tourism assiduity has ate AI by wide open arms, and espoused its every part efficiently, which turned out to be huge advantage for the assiduity.

AI technology is leaving its unique mark within the excursionists by perfecting their experience of traveling. (AI Adjunct the Future of Travel & Tourism with Emergence of Artificial Intelligence- Imagination, 2021) As a ultramodern issue, artificial intelligence (AI) in the trip, Tourism, and Hospitality Industry is a contentious issue. Tata Consultancy Services, Google trip, Trip Advisor, etc. have accepted a number of studies in the recent history on the operation of AI in the trip, Tourism & Hospitality Industry. The whole

conception of this paper is to punctuate the Artificial Intelligence Technologies that has entered in the assiduity of tourism and since also a nonstop gradational revolution has taken place in this assiduity for the good. This paper attempts to enlighten the standpoint about colourful AIs which clearly dealt in the tourism assiduity and left their mark in the assiduity. In similar times, we see the power of technologies that has brought the world together and it has a high position of influence on the artificial terrain

Review of Literature:

Chitra Krishnan. Richa Goel. Vikas Garg, (2022), Existing studies indicate that the adoption of Artificial Intelligence in the tourism sector is increasing rapidly and is expected to significantly transform industry operations in the near future. Researchers suggest that AI-driven technologies are likely to enhance efficiency, productivity, and service quality, leading to substantial growth in the travel and tourism industry. Prior literature highlights that AI adoption could generate large-scale employment opportunities globally, thereby helping to address unemployment challenges, particularly in developing countries like India. Studies also emphasize that automation and intelligent systems have improved customer satisfaction by enabling personalized and seamless travel experiences. Furthermore, scholars argue that technological advancements are essential for sustainable economic growth in emerging economies. The tourism sector in India, being highly dynamic and service-oriented, is expected to benefit economically from AI implementation. Literature concludes that AI has the potential to revolutionize tourism processes through automation and data-driven decision-making. Overall, existing research positions Artificial Intelligence as a benchmark technology for the future growth and competitiveness of the Indian tourism industry.

Mithichar Basumatary, Gunajit Sarma, (2024), This study outline the growing application of Artificial Intelligence (AI) and machine learning in the Indian tourism industry and emphasize both the opportunities and challenges associated with their adoption. The literature suggests that, with effective planning and strategic management, the overall impact of AI on the tourism sector in India is expected to be positive. Researchers highlight that AI technologies can address major operational challenges by improving system efficiency, enhancing customer service, and increasing overall satisfaction levels. Existing research also indicates that technological advancements contribute significantly to higher productivity and operational performance within tourism enterprises. Furthermore, scholars argue that for a developing economy like India, technological progress is essential to achieve sustainable and long-term economic growth. The literature concludes that the application of AI and machine learning in the tourism industry can support India's broader objectives of competitiveness, modernization, and national development.

Nagaraj S, Bharath K, Raja B., Raul R, (2022), This Article highlights a pivotal shift in the tourism sector, where the integration of Artificial Intelligence serves as a dual-edged sword for growth and operational restructuring. While the author projects significant job creation and enhanced customer satisfaction through streamlined, automated processes, they rightly emphasize the necessity of extensive workforce retraining to harmonize human factors with new digital infrastructures. Critically, the text identifies a "human-interaction gap," warning that over-reliance on robotics and chatbots may inadvertently diminish the authentic travel experience. Financial barriers and the unpredictability of nascent technologies are presented as major hurdles for stakeholders aiming for seamless integration. Furthermore, the inclusion of expert

scepticism, such as that from Stephen Hawking, underscores the ethical and existential complexities inherent in autonomous systems. Ultimately, the review calls for a holistic, research-driven approach to navigate these complexities. This perspective aligns with the current need for balanced frameworks that prioritize technological efficiency without sacrificing the cultural "human touch" essential to hospitality. Such insights are invaluable for developing future-proof strategies in the evolving Indian tourism landscape.

Objectives:

1. To examine the impact of Artificial Intelligence on job transformation and skill requirements in tourism-related activities.
2. To identify opportunities and challenges associated with AI-driven changes in tourism employment in India.
3. To assess the role of AI in enhancing productivity, service quality, and workforce efficiency in the tourism sector.

Research Methodology:

Research Design:

The present study adopts a Descriptive and Analytical Research Design to examine the role of Artificial Intelligence in shaping tourism jobs in India. This design is chosen because it allows for a detailed description of current trends and an analysis of how AI technology influences workforce dynamics.

Data Collection Sources:

The study relies on both primary and secondary data sources:

- Primary Data: Collected directly from respondents using a structured Questionnaire
- Secondary Data: Information gathered from research journals, industry reports Ministry of Tourism, white papers, news articles, and official websites to support the primary findings.

Sampling Method and Size:

- Sampling Technique: A Convenience Sampling method is used to reach professionals, employees, and stakeholders within the Indian tourism and hospitality sector.
- Sample Size: The study targets a total of 100 respondents to ensure a diverse representation of views from across the industry.

Data Analysis Tools:

The collected data is processed and analysed using:

- Quantitative Analysis: Use of percentage analysis, frequency distribution, and graphical

representations via Microsoft Excel / Google Forms.

- Qualitative Analysis: Interpretation of open-ended suggestions and industry trends to draw meaningful conclusions.

Scope and Limitations:

- Scope: The study is limited to the Indian Tourism Sector, focusing on job transformation, skill requirements, and efficiency.
- Limitations: The findings are based on the responses of a specific sample size and may be subject to the personal biases of the respondents or the fast-changing nature of AI technology.

Data analysis and Interpretation:
1. Impact on Job Transformation (Objective 1)

Parameters	Percentage
Change in Daily Routine	65%
Essential Future Skills	70%
Task management	75%

The survey indicates that AI is significantly reshaping the tourism workplace.

- Observation: Approximately 65% of respondents "Strongly Agree" or "Agree" that AI has changed their daily routines.
- Skill Shift: 70% of the workforce identified Digital Literacy and Data Analysis as the most critical skills for the future.
- Repetitive Tasks: A vast majority (75%) believe that AI successfully handles repetitive tasks, allowing them to focus on high-value guest interactions.

2. Opportunities and Challenges (Objective 2)

Category	Percentage
Future Job Creation	55%
Primary Barrier	45%
Job Security Concern	50%
High Job Anxiety	20%

There is a mix of optimism and concern regarding AI-driven employment changes.

- Job Creation: 55% of participants believe AI will create new, specialized job roles (like AI travel planners).
- Major Challenge: 45% of respondents identified the "Lack of technical expertise/training" as the primary barrier to AI adoption in India.
- Job Security: Only 20% are "Very Concerned" about total job displacement, while 50% are "Moderately Concerned," showing a cautious acceptance of technology.

3. Productivity and Service Quality (Objective 3)

Indicators	Percentage
Customer Service Speed	80%
Operational Accuracy	60%

The role of AI in enhancing efficiency is clearly visible in the data.

- Service Speed: 80% of respondents reported a "Significant Improvement" in customer service speed through AI Chatbots and automated booking systems.
- Error Reduction: 60% of the workforce feels that AI "Frequently" reduces manual errors in guest management and scheduling.

Key Findings of the Study:

- ❖ Skill Transformation: AI is not necessarily reducing the number of jobs but is drastically changing the skill set required. Traditional tourism roles are evolving into tech-enabled service roles.
- ❖ Productivity Gains: The integration of AI tools has led to faster response times and higher accuracy in booking and guest services, directly improving customer satisfaction.
- ❖ Training Gap: There is a significant gap between the availability of AI technology and the technical proficiency of the current workforce in India.
- ❖ Administrative Relief: AI is effectively taking over "Back-office" and repetitive administrative tasks, shifting the human focus toward "Human-centric" personalized hospitality.

Conclusion:

The study concludes that Artificial Intelligence is a transformative force in the Indian tourism sector rather than a threat to employment. While AI automates routine tasks, it creates a demand for new, higher-level skills involving data management and digital interaction.

For India to fully leverage AI in tourism, the focus must shift from "job replacement" to "job enhancement."

The findings suggest that the future of tourism jobs in India lies in a Hybrid Model, where AI handles speed and data, while humans provide the empathy, cultural nuances, and personalized hospitality that are the heart of the Indian tourism experience. Success will depend on how quickly the industry and the government can reskill the workforce to work alongside AI.

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