

USE OF ARTIFICIAL INTELLIGENCE IN TRAVEL AND TOURISM IN INDIA

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Abstract :

Artificial Intelligence is a new ultra-force to improve efficiency in all the economic activities in industrial sector and service sector and travel and tourism is no exception to this. India is the 8th largest tourism economy in the world. The travel and tourism contribute about 7% to GDP. The travel and tourism are also contributing to employment by giving millions of jobs. The present paper aims to explore the application, benefits, opportunities and challenges of AI in travel and tourism in India. It was revealed that AI improves customer convenience and satisfaction and efficiency of the travel and tourism sector.

Keywords : AI, Sleep Tourism, Slow and Micro Tourism, Medical tourism

Objectives :

- 1) To study the application of AI in travel and tourism in India.
- 2) To investigate the future prospects of AI in travel and tourism
- 3) To identify the challenges of AI in travel and tourism.
- 4) To analyze the benefits of AI in travel and tourism in India.
- 5) To recommend the strategies to maximize the benefits of AI

Research Methodology :

The current study is a descriptive study based on secondary data taken from renowned journals, websites and other reliable online sources.

Introduction :

India is one of the most best travelling destination all over the world. (India, 2025) India has the 11,098.81 km coastal length. India is full of flora and fauna having wide varies of tourist destinations which includes ancient heritage and natural wonders like- beautiful rivers, lakes, forests, wild centuries, gardens, historical monuments, temples, mountains, manmade marvels. Taj Mahal, Hawa Mahal, Gateway of India, Akshardham Temple, Kerala Backwater, Valleys in Jammu and Kashmir, beaches in Goa and many more.

(World Tourism Day, 2025) India recorded approximately 56 lakh Foreign Tourist Arrivals



(FTAs), and 303.59 crore Domestic Tourist Visits till August 2025. As on June 2025, inbound tourism stood at 16.5 lakh visitors, while outbound tourism was recorded at 84.4 lakh travellers. This activity contributed to foreign exchange earnings amounting to Rs.51,532 crores. In addition, as per the provisional estimates of the National Accounts Statistics 2025, the tourism sector contributed ₹Rs.15.73 lakh crore to India's GDP in 2023-24, accounting for 5.22% of the total economy. Besides that, according to the Periodic Labour Force Survey (PLFS), the sector generated 36.90 million direct employments and 47.72 million indirect employments, together accounting for 13.34% of total employment in the economy. These figures make clear picture about significant contribution of travel and tourism to GDP and employment in India.

Artificial Intelligence means creating computer system of replication of human intelligence in machine that are programmed to think, learn and make decisions. It includes personalised travel experience, smart booking apps like makemytrip, destination and crowd management, Augmented Reality Tours, Virtual Tours etc.

There is a huge scope for the use of AI in travel and tourism. In travel it is used in the form of crowd management, face recognition at airport. Similarly in tourism AI can be used in the form different apps for preferred destinations, virtual tours etc. The use of AI revolutionaries the travel and tourism sector in India.

Travel and Tourism in India current scenario :

In India since 2020 and specially after Covid-19 pandemic there is wide use of AI in travel and tourism both by the tourist and the service providers whether they are in travel or in tourism area. (Travel Trade Today, 2026), Indian Union Budget 2026 recognize tourism as 'Growth Engine' status. For this Indian Union budgets allots on tourism infrastructure, policy formulation and other technological updating support.

Apart from active role of Govt, NGO also plays an important role in making and empowering travel and tourism with AI. Non-Government Organization (NGO) work with international organizations like UNWTO and OECD to shape AI governance in tourism. UNWTO (United Nations World Trade Organization) is a specialized UN agency for tourism. It works with 160 member states. It promotes responsible and sustainable tourism universally. (unwto, 2026)UNWTO is a global policy maker in tourism. (OECD, 2025)Similarly, OECD (Organization for Economic Co-operation and Development). OECD is a global organization of 38 member countries that promotes policies for improving social and economic wellbeing of member countries. It publishes tourism trends and reports to identify the different countries and project future trends in tourism and plan accordingly. It collects comprehensive data on tourism, employment and economic impact. It also advises on strategies for tackling over tourism, climate change and digital transformations.

Need of AI in Travel & Tourism in India :

AI is becoming a necessity in the travel and tourism sector in India due to growing expectations of the travelers, complexity of traveling and diversity. AI is needed in travel and tourism in India due to following reasons-



- **To improve the personal experience of the travelers :** With the AI the personal experience of the travelers can improved to an extent. With the various tools of AI the travers can know the real time situations of the destination, whether and crowd position and accordingly plan his visit and enjoy their visit.
- **For managing scale and diversity :** India has vast heritage and natural landscape and cultural diversity. Apart from natural flora and fauna there are various man-made wonders like Statue of Unity, forest, rivers and mountains. All these destinations are in different states of India which needs smart connectivity and other infrastructure; AI helps in solving all these problems effectively.
- **For better crowd control in popular destinations :** There are various destinations in our country which are highly visited and overcrowding is common scene particularly during Diwali vacations or weekdays. These includes famous temples, Taj Mahal, Forts of Rajasthan, Wild life centuries etc. AI gives a clear idea about the crowd position and helps to experience this destination in a enjoyable manner.
- **To increase efficiency :** For increasing the overall efficiency of the service providers AI is very handy. AI facilitates the hotel owners, guide, the management of various destinations and travel persons to plan various things.
- **To improve convenience of travelers and service providers :** All the travelers want to travel for a change from his hectic and busy work schedule. If their journey and stays are not comfortable then his visit or tour will not satisfy them. For comfortable and convenience in traveling and tour AI helps in many ways with the help of various Apps like makemytrip and Railways IRCT and many more.
- **To support sustainable travel and tourism :** AI helps in monitoring the environmental impact, track pollution, and promote eco-tourism. All the destinations should be maintained for future generations. AI helps in this.
- **For strengthening global competitiveness of India in tourism :** It is important for our country to match global competitiveness. AI adaptation helps in matching the global standards.

Future prospects of AI in Travel and tourism in India :

The future prospects of AI in travel and tourism in India can be summarized as follows

- **Smart tourism full of personalized experiences :** AI helps in travelers' preferences, likes and dislikes. There are various AI based assistance which supports global and regional languages which helps in better understanding of the tourist and better personal experience.
- **Destination management :** There are various famous destinations which are hot favorites for not only domestic tourist but also foreign tourist, it includes Taj Mahal, historical monuments, holy river ganga, religious places, lush green forest etc. AI helps in better understanding the crowd in particular season and timing. AI helps in better destination management.
- **Growth and economic impact :** (future of travel India, 2025), the travel and tourism sector in India is growing very fast and its economic impact is very significant. It increases GDP and employment opportunities directly and indirectly. It is project to



grow at 12% - 15% annually. It expects to contribute ₹ 22 trillion to the economy and helps in creating 48 million job across country.

- **Smart infrastructure** : Smart infrastructure means integration of AI, digital technologies, IoT(Internet of things) and automation into physical system like airport, railway, hotel and tourist destinations. Smart infrastructure helps in improving tourist experience, adds to convenience and better overall experience.
- **Meeting global standards** : India should align with the global standards of OECD and UN. AI helps in maintain all the facilities as per global standards and meeting the expectations of world tourism.
- **Necessity for foreign tourist** : The foreign tourists are used to all the AI tools to explore the tourist destination all over the globe. So, India should equip itself with all these AI systems to facilitate the foreign tourist.
- **Ultra-comfort and convenience** : All the tourists want change and ultra-comfort in their travel and while they are exploring the destinations. AI helps in giving ultra-comfort and most needed convenience to the tourist.

Benefits of AI use of Travel and Tourism in India :

There are manyfold benefits of AI application in Travel and tourism. All the travelers and the different service providers from travel and tourism sectors are benefited by AI.

- **Benefits to domestic and foreign tourist** : The AI tools are very beneficial to both domestic as well as foreign tourists. The tourist can know the weather conditions, the current crowd level and route to the desired destination which saves their time of travel and make the journey more comfortable and enjoyable.
- **Benefits to the various service providers of travel and tourism** : The different service providers of travel and tourism sector are greatly benefited by the AI application. The smart travel and tourism is possible with the help of AI tools. The travel, hotel management and other related service providers can plan all the tours for the tourist which can add their revenue and convenience both to the tourist and service providers.
- **Employment generation in local areas** : Due to AI the number of travelers and tourists are increasing and due to this fact the business of local traders increased, the demand for local artist and food also increased giving employment to local youth.
- **Boost new tourism ideas** : with the continuous analysis of the data and expectations provided by the tourist's new ideas of tourism has been developed with the help of AI like -
 - **Medical tourism** : India is a hot destination for medical tourism. Medical tourism means travelling abroad for getting medical treatment with some leisure. India is now a big destination for medical tourism for the foreigner. India is known for high quality treatment with low cost. All the complicated treatment in allopathy and Ayurved can be made available in India at affordable rate.
 - **Eco-tourism** : Eco tourism is the responsible and cautious travel to natural areas that conserves the environment. For example, visit to Tiger reserves like



Tadoba in Maharashtra or a forest etc

- **Sleep tourism** : Instead of adventure some tourism is targeted to restore the sleep of the tourism. In this hectic world there are various people who feel that their sleep has been disturbed due to stress and wrong life style, need sound sleep in natural environment. In this special rooms, bed and blackout curtains are made to experience good sleep.
- **Immersive Cultural Tourism** : This tourism is targeted to let know the tourist the festivals and cultural of a particular area. In this the visit is made during some cultural gathering or festival to understand the tradition and culture in live environment.
- **Wellness & Mindfulness Tourism** : There is big demand for Wellness and Mindfulness tourism. Here physical, mental and spiritual wellbeing is targeted rather than sightseeing. Special stress given on Yoga, meditation, body detox, digital detox, mud therapy, forest therapy etc.
- **Slow and Micro Tourism** : Slow and micro tourism is a latest tourism as against mass tourism. This tourism characterized by long stays, fewer destination, involvement in local cultural activities. It focuses on local destinations and quality of experience rather than number of destinations.

Challenges related to AI use in India with respect of Travel and Tourism :

There are various challenges and problems related to AI which relates to ethical, technical and accessibility-

- **Financial barriers** : The AI systems are costly and requires devices that supports AI system. It is applicable for bigger service provider and tourist companies. But smaller companies AI system is not very beneficial as it is costly.
- **Technological barriers** : In some parts of rural India even the internet and other digital infrastructure is insufficient. For AI tools to run effectively accurate datasets are required but in India the reliable and proper data sets are not available due to fragmented tourism which creates hinderance in AI tools usage.
- **Ethical issues** : AI tools and system works on personalized data set of tourists which may be misuse by ill minded people. Also, there is lack of AI governance legal framework and awareness about it.
- **Over tourism** : When there is over tourism in certain areas in specified time AI tools may not be very useful.
- **Lack of trained Workforce** : There is lack of trained skilled labour personnel who can understand the AI tools and system. In some cases, the traditional tourist management are resistant to change.
- **More useful in urban areas than rural areas** : AI tools are very useful and handy for the players from urban area due to availability of AI skilled workforce. But in rural areas are not very useful due to various reasons like affordability, technical knowledge.

Strategies for maximizing AI benefits :



- Digital infrastructure for AI platform is needed. Strong internet supported by IoT and other digital and online support.
- Smart and sustainable tourism: AI can help in reducing waste by optimum energy use, calculating carbon footprint and EV rent etc.
- Crowd management: implementation of AI driven predictive analytics for understanding the tourist flows on a particular destination.
- Proper data governance and its security: Clear and simple laws for data protection and cyber security should be framed. Similarly proper and reliable data governance is needed.
- Govt initiative and support: Active and solid support from Govt and its agencies are needed to travel and tourism sector to enable them with AI.
- AI secured fraud detection online payment system is required.

Conclusion :

India is among the top tourist destinations of the world and India is rightly said to be 'Global tourism powerhouse'. India not only full of diverse traditional tourist spots including rivers, forest, historical monuments, temples, man-made wonders like Taj Mahal, Forts, beaches, forests but also new modern tourism ideas like medical tourism, eco-tourism, micro tourism and wellness and mindful tourism. Indian Travel and tourism provide employment to millions of people and contributes significantly. In such optimistic situation the application of AI in travel and tourism will further improving the convenience and comfort level of tourist will be icing on cake. This is the era of globalization and digital boom and role of AI in travel and tourism is inevitable and significant as well.

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