A Study on Application of Artificial Intelligent in Tourism and Hospitality Industry of Himachal Pradesh

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Abstract: This paper seeks to understand the impact of social networking sites, web – based innovation and emerging technologies on tourism development in Himachal Pradesh. Highlighting on the Alteration in visitor behaviour and the role of technological innovations in information seeking, the findings indicate that people are now turning to social media to plan their travel, review services and share experiences. Although traditional approaches still prevail, technological interventions—particularly artificial intelligence, Business Intelligence and 3D Simulated Tours —have redefined the structure of the tourism industry. In a tourism-dependent provinces like Himachal Pradesh, there is a clear need for field and real-world studies on this subject to optimize policy planning and local development.

Keywords: **Artificial Intelligence, Tourism Development, Hospitality Industry, Himachal Pradesh, Social Media Influence, Economic Impact, Technological Innovation, Guest Satisfaction, COVID-19 Recovery, Employment Generation.**

INTRODUCTION

In this study an attempt has been made to study the application of artificial intelligent in tourism and hospitality industry of Himachal Pradesh. This doctoral level scholastic investigation is being presented in nutshell. Here only study of literatures related to tourism and hospitality sector of the state and country is being shown, it covers period of 2014-15 to 2024-25.

LITERATURE REVIEW

The paper *"Impact of Social Network on Growth of Tourism in Himachal Pradesh"*by Arjun Bhatiya. Bhatia, A. (2014)[1] have three objectives i.e. (i) To study the usage trend of travel through social networks. (ii) To investigate the degree of effect of social networks in the judgment of touring popular destinations in Himachal Pradesh. (iii) To explore the behaviour pattern of consumers travelling through social networks and understand their transformation into peer-influenced travellers. Studying the entire statistics of the tourism data collected from the sources the last but not the least it could be found out that the customers are looking ICT as a medium of making travel plans but it is not final medium of exchange of information in the travel value chain. *Interpretation:* The role of Artificial Intelligence (AI) is not mentioned at all in this study. Modern technological aspects of AI like predictive analytics, chatbots, sentiment analysis or smart hospitality systems have not been touched upon.It is also not explained how these AI technologies are impacting the economy, revenue, employment, operational efficiency and customer satisfaction of the hospitality industry.How hotels, restaurants and tourism services are adopting AI to gain a competitive edge and provide better guest experience – this is also not discussed. Therefore, it is clear that there is a Momentous break in this research regarding the repercussion of AI and this area calls for moreover in-depth study.

*"Assessing the Impact of Corona Virus (Covid-19) on Tourism and Hospitality Industry in India- A Perspective Study"*by Kaur, J., & Kaur, J. (2020)[2]. The objectives of the study are: To assess the impact of the pandemic virus (COVID-19) on the Indian leisure and travel market and hospitality sector; To scrutinize the turnover rate and workforce reduction caused by the pandemic on various segments of the tourism and hospitality sector; To understand the practical challenges faced by industry employees (such as travel agent, hotel executives as well as supervisor, hotel staff and airline personnel) and suggest solutions based on their experiences. The researcher concluded that the COVID-19 Contagion has caused vast losses to India's inbound travel and hospitality sector. The economic losses may recover in a few years, but human life is invaluable.

Therefore, the public must ensure the wellbeing of themselves and others by following government guidelines.

Interpretation: The study aims to understand how the COVID 19 pandemic impacted India's tourism and hospitality sector—particularly in terms of job losses, revenue decline, and recovery measures. Through interviews and secondary data, the research explores the real-world challenges faced by stakeholders such as hotel staff, catering staff, travel agents, airline staff, etc. The study does not expound how latest technological improvements—such as digital tools, automated systems, and innovative service practices—can help address these challenges. No attention was given to special locality such as Himachal Pradesh, in which tourism is the mainstay of the local economy. Ongoing literature does not analyse how such technologies (excluding AI) can improve the operating efficiency, financial performance and resilience of the sector. This is why it is foundational that future research examines how advanced but non-AI technological interventions can promote long-term economic growth, job security and sustainable business practices in tourism-dependent states like Himachal Pradesh.

"Can India Stay Immune Enough to Combat COVID-19 Pandemic? An Economic Query", by Rakshit, B., & Basistha, D. (2020)[3]. Through this article, we tackle several pivotal research questions and demonstrate India's strength to stay immune to combat COVID-19 pandemic. The research questions are as follows. First, what will be the effect of COVID-19 on the Indian economy and how does it affect the different sectors of the economy? Second, how does the pandemic affect the mutual trade relation between India and China? Third, we question the impact of the civic health system in dealing with the outbreak of the virus in India. This article also presents the growth projection of the Indian economy by different economic agents. We finally conclude the article by mentioning a few policy recommendations for the Indian economy.

Interpretation: This article primarily examines the economic disruptions caused by the COVID-19, Global outbreak in India, along with analyses its impact on key sectors such as agriculture, industry, the services sector, and foreign trade. It takes a macro-level view to show how lockdowns, weak consumer demand, and disruptions in global supply chains affected the country's economy. But, while

there is a mention of the service sector, there is very little discussion about the hospitality industry. The regional impact has remained almost unnoticed, especially in tourism-dependent for instance, states such as. Himachal Pradesh, where the sector is the foundation of the local economy. While the study provides policy recommendations and projections for national-level economic recovery, it does not tell how modern business models improved operational systems and Smart management tools can help revive the hospitality sector. This makes it clear that now a demand for research that comprehend how non-AI technologies (such as digitalisation, automation, etc.) can increased the efficiency, met the changing guest expectations and ensured the long-term sustainable success of the sector - especially notably in states including Himachal Pradesh, which are highly dependent on tourism.

"Artificial Intelligence and Economic Growth: A Theoretical Framework" by Wang, L., Sarker, P., Alam, K., & Sumon, S. (2021)[4]. The aims of this paper are: Analysing how and to what extent companies can increase productivity if they adopt artificial intelligence (AI) as a component of production; Understanding whether AI is complementary or a substitute for labour and human capital, and what impact this may have on economies that provide cheap labour; Evaluating the possibility that the adoption of AI will not provide the benefits that are predicted by traditional economic growth theory, and why this might be the case. This study makes it clear that while Artificial Intelligence (AI) increases productivity and wages, alternatively, it challenges employment and labour share in some sectors. If implemented with the right strategy, AI can act as a labour supplement, but wrong use can increase inequality in the labour market. Policymakers are advised to adopt labour-supporting or automation-based models of AI according to the demographic and economic structure. Empirical and comparative research in this area is necessary in the future so that the global economy can better adopt AI.

Interpretation: The research conducted to date only presents the economic impact of AI technologies in a theoretical and broad manner. These studies examine AI as a production factor and discuss its influence on capital, labour, and productivity. However, they do not specifically target any particular sector or industry, particularly service-oriented sectors like hospitality, where customer

service and personal interaction are crucial. Additionally, there is a lack of comprehensive studies that explore the impact of AI in the specific context of a tourism-dependent state like Himachal Pradesh. The tourism and hospitality sectors play a significant role in the region's economy, yet they have not been adequately addressed from an AI perspective. The existing literature also clearly lacks economic data or empirical evidence, which makes it difficult to confirm these theories in reality.

Also, there are no specific studies on the impact of AI-based technologies such as automated service, data analysis, smart booking and virtual assistants on the local hospitality industry – such as changes in employment patterns, service quality and revenue growth. Therefore, it is clear that there is a call for in-depth assessment and empirical studies on the economic impacts of AI in the hospitality sector of Himachal Pradesh in the spatial and regional context.

"The Technology Acceptance Model and Learning Management System: A Study on Undergraduate Tourism and Hospitality Students" by Kumar, V., Nayak, K. P., & Bhinder, H. S. (2021)[5]. The study has the objectives: To evaluate the adoption attitude and acceptance of Learning Management System (LMS) among students of tourism and hospitality management courses; nTo understand the level of willingness of students to use LMS using Technology Acceptance Model (TAM); To investigate the impact of external factors such as system quality and perceived enjoyment on LMS usage. This study concluded through the TAM model that tourism and hospitality students in North India have a low propensity to adopt LMS. While propensity to use and positive attitude promote actual use of LMS, perceived usefulness does not motivate students to adopt LMS. Driving forces for this are complexity of LMS, lack of training, and availability of alternative simpler platforms. This finding is different from previous studies and requires further in-depth research on this topic.

Interpretation: The main difference is that this study sheds light on only on the acceptance of educational tools (e.g. LMS), while the Implication of the extensive Incorporation of artificial intelligence techniques (AI) in the tourism and hospitality industry, such as chatbots, automated booking systems, data analytics, and smart hotel management systems, on economic growth is not looked at in this study.

"The adoption of artificial intelligence and robotics in the hotel industry: prospects and challenges" by Nam, K., Dutt, C. S., Chathoth, P., Daghfous, A., & Khan, M. S. (2021)[6]. The objectives of this study are: (i) Analyzing the trends in adoption of AI and robotics in the hotel industry: The aim of this study is to understand how artificial intelligence and robotic technologies are being adopted in the hotel industry and where it is taking the industry. (ii) Identifying the key factors influencing the adoption of AI and robotics: The study attempts to find out what key factors facilitate or hinder the adoption of AI from a technological, organizational and environmental perspective. (iii) Analyzing using the TOE (Technology-Organization-Environment) framework: The study uses this framework to look at how technological advantages, organization structure and external environment influence the adoption of new technologies in hotels. (iv) Understanding the special perspective of AI adoption in smart cities like Dubai: To conduct an in-depth study of how the hotel industry is adopting AI and smart technology in leading tourist destinations like Dubai. This study makes it clear that AI and robotics can play a vital role in reducing costs, making operations efficient, and improving customer experience in the hotel industry. However, challenges such as technical complexity, outdated systems, limited IT expertise, and ambiguity of ROI still exist. Adverse reactions such as employees' fear of job loss or resistance to technology are also seen in the process of adopting AI. However, when AI is implemented correctly, it enhances service quality and customer satisfaction. In the future, if hotel owners and managers solve financial and organizational barriers wisely, effective implementation of AI can drive sustainable economic growth in the hospitality industry.

Interpretation: Although this study provides an in-depth analysis of the trends, benefits, and challenges of adopting artificial intelligence (AI) and robotics in the hotel industry, it focuses primarily on developed and technologically advanced urban areas such as Dubai. It does not address the status, impact, and feasibility of AI adoption in tourism-based, semi-urban, or rural areas such as Himachal Pradesh. Existing research is largely limited to the perspectives of management or owners and ignore the experiences of local employees, customers, and communities. As a result, more comprehensive studies are necessary on aspects such as practical feasibility, employment, cost-benefit analysis, and

customer feedback of the impact of AI and robotics in low-tech-resource areas.

"Technology-enabled business models and the consequences on tourism industry: current impacts on incumbents and communities and future impacts from AI technology adoption" by Destefanis, A. (2022)[7]. This study Illustrates that the employment of AI technologies in the hospitality industry has a profound impact on employee mindset, work performance, and business engagement. Management support, training, and a positive change culture are fundamental to achieving successful deployment of AI in an organization. Yet, the generalizability of these findings is restricted to internal (employee-based) impacts only. More broadly, the hospitality industry can improve customer experience, reduce operational costs, and increase tourism revenues through AI technologies. Hence, adopting AI in a tourism-centric Jurisdiction such as Himachal Pradesh can give a new direction to economic development. These outcomes contribute to the development of policies for policymakers and hoteliers.

Interpretation: This study focuses specifically on the impacts of artificial intelligence (AI) on employees in the hospitality sector such as job performance, satisfaction, stress, and attrition. The study suggests that organizational support, employee readiness, and technical knowledge are essential for the adoption of AI.

However, this study is limited to human resources and employee experience only and does not address the impact of AI technologies on the overall economic growth of the hospitality industry. Specifically, Variations in earnings, expenditure control, guest satisfaction, and tourist numbers as a consequence of the use of AI in a tourism-dependent state like there has been limited focus on Himachal Pradesh in analysed.

Therefore, an important research gap is that there is no field study available so far on how AI can bring positive changes to the economic condition of the hospitality industry in Himachal Pradesh. This topic is relevant and necessary for further research.

The Research Paper *"Growth of tourism in Himachal Pradesh: A study of district Shimla in Himachal Pradesh"* by Thakur, S. K. (2023)[8] have two objectives (i) The main feature of this research endeavours to assess the significance of tourism in the economy in Himachal Pradesh, notably Shimla district, and its role to the holistic development of the state. (ii) This investigation attempts to understand how tourism activities are affecting the community livelihood of the state, and to what extent this sector is helping in generating employment, business, and physical development. The researcher concluded that The contribution of tourism to the economy of Himachal Pradesh is steadily growing, especially in Shimla district, which attracts about 19% of the state's total tourists. However, Shimla's growth rate in sectors such as hotels and restaurants has been Less brisk than other districts. Despite this, tourism has Sprang up as a major root of employment and revenue in the state.

Interpretation: Although several studies, including the current one, have extensively analysed the economic contributions of the tourism and hospitality sector in Himachal Pradesh—such as employment generation, contribution to state gross domestic product (GSDP), and infrastructure development—there still remains a significant gap in research on technological developments in the sector. In particular, this area remains under-researched. so far at the regional level, especially in Himachal Pradesh, on the impact of budding technologies like Artificial Intelligence (AI) on the economic condition of the hospitality sector.

Most of the Documentation to date has focused on traditional factors, such as: Escalation in the number of domestic and international tourists, employment patterns in the accommodation and food services sector, And financial investment by the state government.

But today in the global hospitality sector: Customer service from AI-based chatbots, Demand estimation through Predictive Analytics, Personalized marketing strategies, Technologies such as smart infrastructure are being rapidly adopted, completely transforming the operational structure.

However, there are no specific studies in Himachal Pradesh evaluating whether: How the adoption of technologies such as AI is impacting economic indicators such as productivity, profitability, workforce composition, and guest satisfaction. Hence, it is imperative that dedicated research is conducted to elucidate the economic impact of the adoption of AI technologies in the hospitality sector in Himachal Pradesh. This approach will facilitate and further support a better grasp of the current

economic growth besides; it will guide policymakers and industry players towards the effective use of AI.

*"Artificial Intelligence (AI) in the Hospitality Industry: A Review Article"*by Limna, P. (2023)[9]. The 0bjectives of this review article are: To present a comprehensive analysis of the existing literature related to the use of artificial intelligence (AI) in the hospitality industry; To evaluate how AI technologies contribute to improving customer service, increasing operational efficiencies, and reducing costs in the hospitality industry; To identify risks posed by the use of AI, such as loss of jobs in low-tech fields, loss of control due to robot autonomy, and challenges related to security and privacy. The researcher concluded that Artificial Intelligence (AI) is revolutionizing the hospitality industry, improving customer service, marketing strategies, and efficiency. This technology enables big data analysis, personalized services, and improved customer experience. However, it also comes with barriers as exemplified by privacy and impact on employment. Therefore, the industry should implement AI as per its requirement in areas where it has maximum benefit. Balanced and strategic use can meet the expectations of both customers and employees. Ultimately, the right use of AI can lead to sustained growth in business performance.

Interpretation: This published study highlights how modern computerized cure are being adopted in hospitality services around the world. It highlights the impact of technological advancements on guest satisfaction, business efficiency, efficiently, and service quality, as well as the benefits and potential challenges. But the analysis is internationally focused and neglects into account local or regional perspectives—especially in tourism-dependent regions like Himachal Pradesh. The report acknowledges that technology helps drive economic growth, but it does not elaborate on how these technologies generate employment, support local businesses and how income within the state administration affects important economic indicators such as growth. Furthermore, the study neglects to explain how small businesses, or institutions located in remote and hilly areas, are able to adopt these technologies and what challenges they face. Hence, there is a need for research that understands the impact of technological innovations at the local level—especially in tourism-intensive and remote areas like Himachal Pradesh—to ensure

sustainable and inclusive economic growth in these regions.

*"Exploring the Prospects of Augmented Reality and Interactive 3D experience on Tourism landscape in India"*by Chourasia, S., Jodhana, L. S., Verma, B., & Shrivastava, A. (2023)[10]. This study explains that Augmented Reality (AR) and Virtual Reality (VR) technologies are proving to be helpful in giving a new direction to experiences in the Indian tourism industry. These technologies not only provide visual and interactive experiences to tourists, but also make remote and historical sites virtually accessible. Especially during crises like the pandemic, the utility of these technologies increases even more. The study indicates that AR and VR are no longer just futuristic concepts, but they have become practical and effective tools in the field of tourism. Through these technologies, not only the tourist experience is enriched, but it also promotes sustainable and responsible tourism. The presented study helps policy makers; business organizations and administrative units associated with the tourism sector to understand how tourism development can be strengthened through these advanced technologies.

Interpretation: There are: Absence of industry-specific studies– Most studies have adopted a broad or national perspective, which has not provided a deep comprehension of the impact of AI on a specific service sector like hospitality; Lack of local context– In a tourism-based economy such as Himachal Pradesh, where the hotel industry is a major pillar of Improvement in economic performance, It has been observed no specific research on the use of AI and its economic consequences; Lack of applied/data-based studies– Most of the research is theoretical and not based on empirical data or findings from local businesses, diminishing its value for strategic decisions making; Ignoring parameters such as employment, cost, and customer experience – The potential of AI in the hospitality industry such as smart hotels, automated check-in, data analytics, and customer service that has the potential to enhance business efficiency and economic value have not been scrutinized in such research.

*"The Effect of Artificial Intelligence (AI) on Guest Satisfaction in Hotel Management: An Empirical Study of Luxury Hotels"*by Al-Hyari, H. S. A., Al-Smadi, H. M., &Weshah, S. R. (2023)[11]. This study concludes that AI has significantly enhanced guest

satisfaction and operational efficiency in luxury hotels through personalized and efficient services. AI tools such as chatbots, virtual assistants, and smart systems improve the service experience and reduce staff workload. Although human interaction is still important, the incorporation of AI is rapidly changing hospitality service standards. As the technology advances, its widespread use will further increase in luxury hotels.

Interpretation: There are: Lack of regional impact - This research focuses on metropolitan and advanced markets like Jordan, while the effect of AI use in tourism-based and elevated terrain states including Himachal Pradesh remains insufficiently examined; Absence of economic perspective - The research limits the impact of AI to guest satisfaction and Level of service excellence, without addressing how the adoption of AI technologies has impacted the economic growth (such as revenue, employment, cost reduction) of the local hotel industry; Lack of public and private investment - The study does not cover government policies, infrastructure, and investment challenges needed to implement AI in regions like Himachal; Post-COVID-19 strategies - No attention is given to how is implemented or impacts AI in the hotel industry has emerged as a catalyst for economic revival after the pandemic, which is extremely important for tourism-based states like Himachal.

"The Impact of Artificial Intelligence on Hospitality Employees' Work Outcomes" by Ersoy, A., &Ehtiyar, R. (2023)[12]. The objectives of the study are: To analyze how youth in rural valleys, particularly Shanti Valley in Banjar sub-district of Kullu district of Himachal Pradesh, are coping with challenges and opportunities related to education, livelihood and social changes; To understand the impact of higher education on employment, social status and marriage prospects of youth in the region, and why this education is not providing them with the desired stable jobs; To study how local youth are shifting from traditional agriculture-based life to tourism industry, and to what extent this shift is based on family background and social networks. This study Demonstrates that the adoption of AI technologies in the hospitality industry has a significant impact on employee attitudes, work performance, and job satisfaction. According to the study, management support, technical know-how, and organizational readiness are instrumental in successfully implementing AI. Despite this, the finding does not

demonstrate shed light on the economic utility of AI. AI is not just a technological tool but also a means to enhance service quality, efficiency, and innovation in the hospitality sector. Therefore, the right use of AI Will positively impacts employee efficiency but also boost revenue and tourist satisfaction, ensuring economic progress of tourism-based sectors like Himachal Pradesh.

Interpretation: This study mainly focuses on the psychological and work-related impacts of AI on employees in the hospitality sector such as job satisfaction, stress, work performance, and attrition. The study has identified elements such as employee attitudes, management support, and technical know-how as facilitating or inhibiting factors in AI adoption.

However, nowhere in this study has it been analysed how AI technologies impact the overall economic growth of the hospitality industry (e.g. revenue, efficiency, cost reduction, service quality, increase in tourist numbers, etc.), especially at a regional level, such as a tourism-based state like Himachal Pradesh.

Therefore, a clear research gap is explained by the non-existence of dedicated and location-specific study available yet on how the adoption of AI will impact the Economic advancement through hospitality industry in Himachal Pradesh. This gap provides a novel perspective and regional relevance to your research.

The study *"Predicting tourism in Himachal Pradesh: An application of ARIMA model"* by Nagrath, G., & Sood (2024)[13.] The objective of this study are: To develop a Statistical methodology using ARIMA model to evaluate upcoming travel patterns in Himachal Pradesh; To examine potential transformations in the number of tourists in hotels based on temporal fluctuation, economic conditions and policy revision in the tourism sector; To develop forecasts utilizing past data which can Aid industry participants in tourism management, strategic planning by authorities, and strategic development process. The study concluded that Tourism in Himachal Pradesh is growing steadily, with hotels registering an 8% increase in occupancy rate and 10% increase in room rates. The ARIMA model provides accurate forecasting of tourist demand, helping the hotel industry to plan better and profit. This strategy promotes sustainable tourism and economic progress of the state.

Interpretation: Although several earlier researches, such as studies using ARIMA models, have successfully forecasted tourism trends in Himachal Pradesh based on historical data, these studies have mostly been limited to seasonal trends, infrastructure limitations, and tourist numbers. But, Research to date has paid petite awareness to the outcome of modern technological advancements on the operational and financial features of the tourism and hospitality industry. The Current literature does not Manifestly explain how digital tools, automated systems, and smart operational strategies are improving service quality, productivity, and profitability. This concept has become Expressly important now, as tourist expectations have changed following the COVID-19 pandemic, and they now expect personalized and fast services. Thus, it is vital that imminent research focuses on understanding how the use of modern technologies can assist in the long-term and inclusive growth of the hospitality sector in Himachal Pradesh.

"Shifting rurality's: a case study of higher education, tourism and youth in Banjar sub-district, Kullu, Himachal Pradesh" by Mehra, D. (2024)[14]. The aims of the study are: To analyse how youth in rural valleys, particularly Shanti Valley in Banjar sub-district of Kullu district of Himachal Pradesh, are coping with challenges and opportunities related to education, livelihood and social changes; To understand the impact of higher education on employment, social status and marriage prospects of youth in the region, and why this education is not providing them with the desired stable jobs; To study how local youth are shifting from traditional agriculture-based life to tourism industry, and to what extent this shift is based on family background and social networks. The study concluded that Higher education remains undeveloped in terms of the main source of employment for youth in Shanti Valley, but They are steadily transitioning away from agriculture and horticulture into non-agricultural sectors, especially tourism. The region's economy is now increasingly dependent on a mixed structure of local-global tourism. The new lifestyles and ways of working of the youth are based on their personal experiences and family backgrounds. Education is not directly linked to marriage or formal employment, but is becoming a symbol of curiosity and global thinking. The traditional agriculture-based lifestyle in Shanti Valley is now turning towards urban consumerist modernity. During the same period, the impact of eco-tourism and urbanization is deeply affecting the local ecology and lifestyle. In the future, the youth will play a central role in determining the direction and form of this change.

Interpretation: The study by Diya Mehra presents a detailed sociological analysis of changes in rural life in Shanti Valley (Kullu) in terms of tourism, youth aspirations and higher education. However, the study does not analyse the role or impact of artificial intelligence (AI) in the hospitality industry. While the research shows growth in tourism-related non-agricultural employment, there is no detailed discussion on how the use of AI-based technologies can affect the quality of these services, employment patterns or economic growth. Furthermore, the study focuses primarily on socio-environmental change, and does not analyse how the use of AI can enhance efficiency, customer satisfaction and business growth in hospitality services. In this context, a clear research gap arises on how the adoption of AI technologies can drive economic resilience and growth in Himachal Pradesh's hospitality industry.

"Exploring The Impact of Artificial Intelligence Integration on Guest Experience in The Hotel Industry" by Acharya, P., & Mahapatra, S. S. (2024)[15]. The main aims of the study are: Analyzing the impact of AI on guest experience: This study seeks to understand how the use of artificial intelligence in hotels improves guest experience; Identifying influential AI technologies in the hotel industry: The aim of the study is to find out which AI technologies are proving to be most useful in enhancing guest satisfaction; Understanding guests' perceptions and reactions to AI services: This objective is related to understanding what are the guests' opinions, likes, dislikes, and concerns about AI services in hotels. The study concludes that the integration of AI in the hotel industry improves operational processes and helps to provide personalized service to guests. Guests positively perceived the usefulness of AI technologies, especially in booking, recommendations, and automated check-in processes. However, most guests also expressed that the role of human interaction is still extremely important in the hotel experience. AI technologies are helpful in improving service efficiency, but it has not yet become a central component of the guest experience. In the future, as customers' technological savvy increases, their expectations will also increase. Therefore, the hospitality industry should adopt a balanced

combination of AI and human service to achieve satisfaction, loyalty, and long-term economic benefits.

Interpretation: This study analyses the changes in guest experience due to AI integration in the hotel industry. The research shows that AI-based technologies such as chatbots, virtual assistants, and smart booking improve guest satisfaction and operations. At the same time, the research also found that guests have mixed reactions to AI — some find it useful, while others miss the human touch.

However, this study is limited to service quality and customer experience only. It does not analyse the effect of AI on the overall economic growth of the hospitality industry (such as revenue, cost efficiency, new jobs, increased tourism). Also, this study focuses on a national or city perspective and ignores the potential regional socio-economic impacts of AI adoption in a tourism-based hill state like Himachal Pradesh.

This research, therefore, leaves a glaring gap: there is no detailed, location-specific study available yet on the impact of AI on economic value addition, job creation, and sustainable development in the hospitality industry of Himachal Pradesh.

CONCLUSION

Based on the research, it is evident that effective use of technological tools such as digital Communities and neural networks is extremely important to fortify the leisure Sector in Himachal Pradesh. Although earlier studies have been limited to Indigenous Practices such as tourist numbers, Transport and Utility Network, Regulatory Framework this research shows that it has now become mandatory to Integrate advanced technology in the modernization Process. Changes in buyer psychology through social media and the growing demand for AI-based services convey that technology is not only boosting service performance but also playing a role in to the localized economic development. Hence, future research should be done in this direction with a detailed and sector-specific approach, so that the tourism-based economic segment of Himachal Pradesh can become more Viable, environment-conscious, and driven by innovation.

REFERENCE

[1] Bhatia, A. (2014). Impact of Social Networks on growth of Tourism in Himachal Pradesh. *Vispar International Conference, December 2014,* pp. 1-17.

[2] Kaur, J., & Kaur, J. (2020). Assessing the Impact of Corona Virus (COVID-19) on Tourism and Hospitality Industry in India-A Perspective Study. *International Journal of Management (IJM)*, Volume 11, Issue 12, December 2020, pp. 3496-3511.

[3] Rakshit, B., & Basistha, D. (2020). Can India stay immune enough to combat COVID-19 pandemic? An economic query. *Journal of Public Affairs*, *20*(4), e2157.

[4] Wang, L., Sarker, P., Alam, K., & Sumon, S. (2021). Artificial intelligence and economic growth: A theoretical framework. *Scientific Annals of Economics and Business*, *68*(4), 421-443.

[5] Kumar, V., Nayak, K. P., & Bhinder, H. S. (2021). The technology acceptance model and learning management system: a study on undergraduate tourism and hospitality students. *European Journal of Interdisciplinary Studies*, *13*(2), 65-89.

[6] Nam, K., Dutt, C. S., Chathoth, P., Daghfous, A., & Khan, M. S. (2021). The adoption of artificial intelligence and robotics in the hotel industry: prospects and challenges. *Electronic Markets*, *31*(3), 553-574.

[7] Destefanis, A. (2022). Technology-enabled business models and the consequences on tourism industry: current impacts on incumbents and communities and future impacts from AI technology adoption. *Doctoral Program in Management Engineering (34th Cycle), Politecnico di Torino, June 21, 2022.*

[8] Thakur, S. K. (2023). Growth of Tourism in Himachal Pradesh: A Study of District Shimla in Himachal Pradesh. *International Journal of Engineering Technologies and Management Research*, *10*(12), 13-39.

[9] Limna, P. (2023). Artificial Intelligence (AI) in the hospitality industry: A review article. *International Journal of Computing Sciences Research*, *7*, 1306-1317.

[10] Chourasia, S., Jodhana, L. S., Verma, B., & Shrivastava, A. (2023). Exploring the potential of augmented reality and virtual reality on Indian tourism industry. *The Gurugram University Business Review*, 40-49.

[11] Al-Hyari, H. S. A., Al-Smadi, H. M., &Weshah, S. R. (2023). The impact of artificial intelligence (AI) on guest satisfaction in hotel management: An empirical study of luxury hotels. *Geo Journal of Tourism and Geosites*, *48*, 810-819.

[12] Ersoy, A., &Ehtiyar, R. (2023). The impact of artificial intelligence on hospitality employees' work outcomes. *Advances in Hospitality and Tourism Research (AHTR)*, *11*(4), 505-526.

[13] Nagrath, G., & Sood, S. (2024). Predicting tourism in Himachal Pradesh: An application of ARIMA model. *Shri DharmasthalaManjunatheshwara Institute for Management Development, Mysuru, India 12th International HR Conference on "Navigating the Human Capital Management in the Digital Era" on 19 and 20 December 2024, ISBN Code 978-93-83302-72-7,* Pages 1-27.

[14] Mehra, D. (2024). Shifting ruralities: a case study of higher education, tourism and youth in Banjar sub-district, Kullu, Himachal Pradesh. *South Asian History and Culture*, *15*(2), 184-200.

[15] Acharya, P., & Mahapatra, S. S. (2024). Exploring the impact of artificial intelligence integration on guest experience in the hotel industry. *Geo Journal of Tourism and Geosites*, *54*, 802-810.