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“Artificial Intelligence In Hotel Management & Hospitality Sector In India”

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ABSTRACT:

This paper attempts to study the implementation of Artificial intelligence in Hotel management & Hospitality sector. The purpose of this study is to know about the need and the impact of Artificial Intelligence in Hotel management sector in India. To know about customer satisfaction towards the service & its quality in hotels, to know how it is served & in what time and accordingly implementation of AI in the hotel management sector in India. Only 1% hotels are using AI in India. The paper focuses on the future use of AI in Indian hotels. The use of AI in hotel management sector, proves to be a game changer. The main aim of the study is to find out the ways of implementation of AI in hotel industry in India. For that the researcher proposed a

KEYWORDS: Artificial Intelligence, Hospitality, Hotel Management, Human Computer Interaction (HCI), Virtual Assis

I. INTRODUCTION

Nowadays AI is having great impact on business. AI has gained a foothold in the world of business, which is getting larger and larger day by day. Most of businesses have already adopted it and remaining are ready to adopt it and plan accordingly. AI helps in to bring a positive change in much of the daily work environment. No one can ignore the great impact of AI in business. It not only give profits but also save time and energy of manpower as AI can eliminate certain manual or repetitive tasks. It has many uses in business like for demand forecasting, customer care etc. In almost every area of business AI shows its importance. Especially, if people talk about the businesses in India, it is clearly shown by the

research report 2018 of PWC, the perceived impact of AI on business and individuals shows positive views among business decision makers and regular participants in terms and its potential to contribute towards socioeconomic causes in India like economic growth, health and well-being, and education. AI may not always be a solution for every company, but failing to examine the possibility of utilizing AI could be serious for a company's competitiveness in the near future. [3] Companies are using it for the most vital components like Customer Relationship Management (CRM). It is the coordination between sales, marketing, customer service, field support and other customer contact functions [4]. Indian government is also supporting it by giving a very positive signs for the use of AI to meet various goals. The AI Task Force, formed under the Ministry of Commerce and Industry, Government of India, has brought together experts from diverse fields to shape the AI roadmap for the nation and has recently released its findings and recommendations to the government. [4]

1.1 Need of AI in hotel management sector in India:-

AI has not been using by hotel management sector in India. Only one or two big brands are using it. As all are aware about it that AI has been proven as game changer and known as helping hand for hotel management sector. The most recent trend and example of this is Robotic kitchen SPYCE which is designed to cook, serve and clean up. It is inspired by the experiences as hungry college students. The fast casual restaurant was created by 4 MIT graduates. It serves salad and grain bowls and take orders from electronic kiosk. It also provide screen displayed order. It offers vegetarian and gluten free bowl. Each bowl costs \$ 7.50. It serves 7 customizable options. It has

only one location at Boston. According to Michael Farid, SPYCE co-founder and CEO, “As robotics-obsessed engineers, we set out to create a new & efficient way of cooking food”. [6] US-based start-up Creator has unveiled a robot-run restaurant which makes burgers priced at \$ 6 each. The machine which makes the burgers contains 350 sensors and 50 actuator mechanisms to prepare the bun, add toppings and cook the patties in under 5 minutes without any human intervention. Formerly known as Momentum Machines, Creator was founded by Alex Vardakostas in 2009. It left us with the most vibrant question that are robots the future of the food industry? And if yes, then it should be installed with some values and ethical limitation along with the purpose of providing ease of business, it should be proved as bliss for us not as a curse. [6] If this kind of things can happen in other countries, India can also adopt this and can excel in every sector especially in the hotel management sector. A country like India, with huge manpower and vast opportunities, if it will go to adopt the right strategy at the right time, it will win the market. It shows the importance of AI in the particular sector in India. The use of AI saves time, human efforts and manpower. It increases customer satisfaction towards services, it also increases the quality of service and most vital component it saves time duration. As time is considered as money, so saving time is like saving money. It increases sales. It is helpful in marketing, advertisement, demand forecasting etc.

1.2 Impact of AI in hotel management sector in India:-

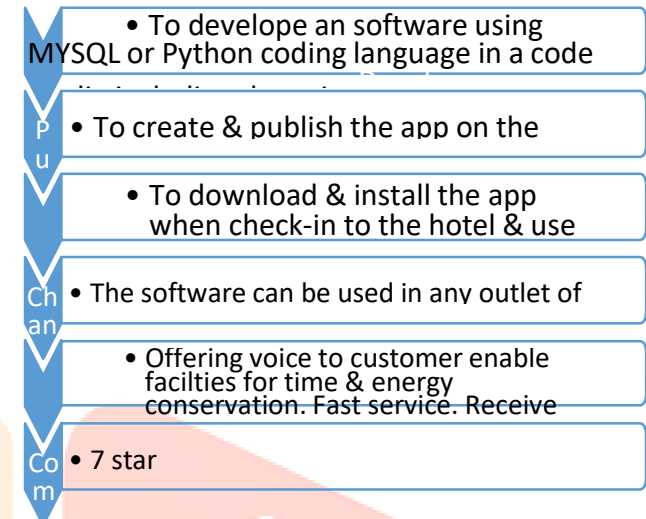
By adopting AI in the hotel management sector in India, it will create a tremendous impact. By the use of AI in the hotel management sector will reach new heights of comfort and prompt services.

This whole new wave of artificial intelligence research and technology really hinges on this “emergence-view” of intelligence being a useful way to analyse intelligent systems. [1] AI potential has no limits towards the service & hospitality aspect. Examples of such services are AI at the front desk - while checking in, there will be no formal identification needed. AI could instantly sync through the smartphone & the smartphone will be the key to the room. Room service - the waitlist will be excluded as the application will allow the guest to pre-order the service. Also with the use of automated car parking feature, the hotel could build an architecture with guidelines in the parking so that the car would itself park in the garage. AI will also be a beneficiary when it comes to cleaning schedules & maintaining standards before the

arrival of guest. Smart appliances will keep the note when the guest are not in the room by tracking the syncing device.

II) LITERATURE REVIEW:-

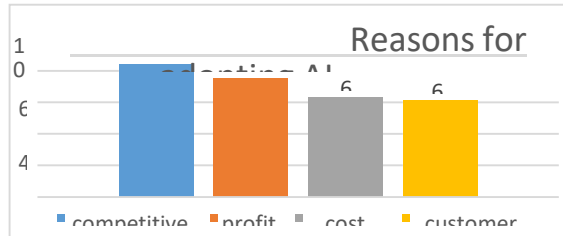
Hospitality Technology's own research indicates as much. According to the 2018 Lodging and Restaurant Technology Studies, AI was named a top technology with future-impact for both hotels (70%) and restaurants (38%). [8] Thanks to recent



advances in artificial intelligence, hotels have begun to equip their rooms with smart devices that have voice recognition systems. One such hotel that has equipped as many as 5000 hotel rooms with Amazon's Echo speaker is Wynn Las Vegas. The guests at Wynn would be able to control many features in the room with Amazon's Alexa, a Voice-Controlled Virtual Assistant (VCVA). This may not be the only hotel to see Alexa in hospitality. [9] Similar AI used around the world are Connie - the concierge, Ivy - the direct messenger, Rose - the personal assistant etc. A company named Kohler made a smart AI-based sanitary need toilet for ultimate comfort. Which is totally based on automation. Its intelligent seat cover detects the need of sanitation and supplies water automatically. It is having many more features like automatic warm air-dryer, automatic deodorizer which keeps you fresh etc. It intelligently detects the comfort and sanitation need of the customer and acts accordingly. [10]

RESEARCH METHODOLOGY

Research Objectives:- To study the need of Artificial Intelligence in Hotel management sector in India. To study the impact of Artificial Intelligence in Hotel management sector in India. To find out the ways which will be helpful to implement Artificial Intelligence in hotel management & hospitality in India. To propose the plan of a software system for implementing AI in Indian hotel management sector.



This paper is a survey based paper. Data has been collected through various sources like email, telephone, personal visits to hotels, personal interviews, telephonic interview etc. Based on that researchers drawn a conclusion that only one or two big brands are using AI in India. Researchers realised the importance and use of AI in hotel sector in India, so they prepare a proposed plan to apply AI in Indian hotels, as follows

III) PROPOSED SYSTEM

With an indirect approach of implementing AI in hotel management & hospitality, the simple notion is to develop a software in place of intercom or bell used in room service or for ordering any service. The software will let the guest order for any service through their smartphone consuming less energy, time, work effort of both: employee & guest. The order place will be redirected through the software to the particular service place in the hotel, directly. Also it would allow the guest to personalize their user experience & needs from time-to-time when needed. The agenda here is to give the customer or guest a satisfactory stay by providing the one-click service or hands-free service by speech or gestures using the software. This application can be a helping hands when suffering through different language discussion, also relief for the deaf or mute personalities, quick & spontaneous reply for the customer satisfaction

I) Conclusion and Future scope:-

The use of Big Data [11], Cloud Computing [12], NLP [13] are no more new words for business. In this paper, researchers focuses on the need and importance of AI in business, especially in Hotel management sector in India. Researcher also found out the customer satisfaction towards the service & its quality in hotels and accordingly

implementation of AI in the hotel management sector in India. Researcher found out that only few hotels like Hyatt are using AI in India. So, the researchers will focus on the use of AI in Indian hotels. For that, the researchers have found out the ways of implementation of AI in hotel industry in India in form of a proposed a software system to implement AI, which the researchers believe will reach new heights of competitive advantage and comfort. Through diagram the researchers want to justify and try to prove the findings are as follows-The software will show its impact through a unique way. Guests order for any service through their smartphone consuming less energy, time, work effort of both: employee & guest. There will be no need to call for someone as guest can directly place an order through the software for the room service in hotel. Also it would allow the guest to personalize their user experience when needed. It is clearly shown in section IV of this paper. For AI to become a prominent feature in future strategies, companies must figure out how humans and computers can build off each other's strengths to create competitive advantage [5]. With the increasing use of AI and Human Computer Interaction (HCI) [14] in a comfort based industry, will going to reach and erect a competitive vantage for potency for upcoming opportunities in India. As India is growing with rapid speed towards global competitiveness, these kind of advanced techniques will be prove as privilege for Indian hotel and hospitality sector.

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