AI Based Tour Management System

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Abstract: Tourism is an integral a part of human life. We always search for changes and adopt them. Now-a-days the tourism industry features a great importance in capitalism and finance. Since 2000 the tourism industry has been giving the variety of advantages to countries worldwide. The amount of foreign tourists visiting India which has given exchange earnings to the Country. Here, we've focused on the expansion and performance of the Indian tourism industry. Nowadays, everything a traveller must do is out there on an internet site. Employing a website, travellers can plan where they need to travel, weigh budgets and make bookings and cancellations and compare options. Doing this involves reading copious amounts of descriptions, terms and conditions, instructions and user comments before arriving at decisions. The opposite option is to supply a chatbot that's a conversational app that reduces the quantity of interaction required by refining intent and context into the conversation.

Keywords*:* Artificial Intelligence, tourism

1. INTRODUCTION

Travelling is a crucial to think about terms of development. Exchange of traditions, knowledge and fashion helped in opening doors of curiosity for citizenry. Today planning a tour is out there on websites. AI is changing every aspect of our lives. From self-driving cars to talking bots, there are numerous samples of AI in use today. Gone is the times once you had to calculate an agent to plan your next holiday. You have not got to engage yourself therein tiresome chain of conversations together with your agent for your travel arrangements. AI now infiltrates every aspect of the tour and travel industry. As we are presenting the knowledge on the project of AI based Tour Management System, we've noticed that Technology and AI is playing a really much important role within the tourism industry, globally. From the hotel, flights, visa arrangements, till the booking of the taxi or table within the hotel, we get to ascertain n numbers of applications, websites and portals for an equivalent. Still, thanks to the advancement of those platforms, many people don't feel comfortable with an equivalent and still prefer the middlemen or agents for the services. With the assistance of this technology, you'll get a customized and intelligent travel solution tailored consistent with your needs. Quick access to the appointments, schedules and reservations with virtual tour planner/ guide making your holiday/ tour more stress-free. The main target of the work project lies on current AI applications like chatbots or robots and their usage along the traveller journey.

1.1 Objectives:
1. To provide a solution that is feasible and user-friendly for the management and planning of tour/vacation.
2. Recommend and suggest various options needed for travel arrangements that are relatively convenient to the user.
3. Provide the user with the basic requirements ideology of planning a tour and budget.
4. Give a better understanding about the place that the user is going to visit to avoid confusion and chaos.
5. Preplanned, transparent and handy notifications of the next task that is assigned.
6. Suggest, schedule and book various means of transport and accommodations.

1.2 Methodology:
To interact with users this can be technical as well as non-technical person.We are obligated to create UI as simple and user responsive as possible.

2. LITERATURE SURVEY

Customer satisfaction is that the main indicator of the power to deliver a product that draws tourists and therefore the ability of the destination to satisfy the promise given by the marketing image that's created by the marketing image of the tourist. Numerous research articles (Peter and Olsen, 1987; Pizam, and Milman, 1993) have examined the difficulty of consumer satisfaction and there's almost unanimous agreement that knowledge of customer expectations and requirements provides an understanding of how customers perceive the standard of an honest or service.

reference: https://core.ac.uk/download/pdf/10826021.pdf

Paper	System	Systems Goal	Methods used
https://www.sciencedirect.com/science/article/pii/S2590005620300059#bib19	iTour	a Java-based IoT framework that aims to involve citizens in the tourism development process	
https://www.sciencedirect.com/science/article/pii/S2590005620300059#bib21	MuseFy	a mobile application which adapts its' UI and provides personalized assistance to users	
https://www.sciencedirect.com/science/article/pii/S2590005620300059#bib24	CURUMIM	a tourism recommender system that uses data available on the Facebook social network, in order to offer personalized recommendation to its' users and positively surprise them	Content Based (CB) and Collaborative Filtering (CF) techniques to discard from the whole set of possible places to recommend
https://www.sciencedirect.com/science/article/pii/S2590005620300059#bib30	TreSight	a context-aware recommendation system named that integrates IoT and big data analytics for Smart Tourism and sustainable cultural heritage in the city of Trento, Italy	
https://www.sciencedirect.com/science/article/pii/S2590005620300059#bib2	Find Tourist Profile	detects users' preferences implicitly, based on the geolocation of social media photos	Deep Learning and Fuzzy Logic techniques
https://www.sciencedirect.com/science/article/pii/S2590005620300059#bib38	UTravel	a mobile app that utilizes user profiling in combination with context based data in order to guide individuals to POIs based on their current location as well as their previous evaluations via the collaborative filtering principles	UTA algorithm [62]/K-Means clustering algorithm

3. RELATED WORK

3.1 Existing System
• Users have to visit a tour planner/ agent to plan or manage all the bookings, accommodations and budget.
• Manual based system where the user needs to work according to the agent plan.
• Systems are strictly time oriented.

3.2 Motivation
We get to learn how the AI is playing an important role in growing business in the tourism industry, since past decades of years, human needs for travel tourism and hospitality, and AI to help to the same, are growing together hand in hand.

3.3 Problem Statement
AI to develop tech savvy platforms in tourism and in a user friendly manner to the customer base.

4.   PROPOSED SYSTEM

Initially, a login page will appear and users will be required to login in order to proceed.
1) If the user is new he/she will have to fill the registration form (username, password, email, firstname, lastname, etc.) This information will be entered into an online database.
2) After logging in, the user will get a screen with 2 tabs.

Tab 1 :
        1. It will contain a set of questionnaires which the user has to reply using radio buttons.
        Chatbots controlled by artificial intelligence play a very important role in the tourism industry. The term "chatbot" is derived from the terms "chat" and "robot", and it aptly describes their role. Chatbots are essentially computer programs that stimulate a human conversation using natural language. The first chatbot called ELIZA was developed in 1966 and was developed to trick its users by making them believe that they were having a conversation with a real human being. Chatbots have evolved to a great extent since the introduction of the first model and their main fields of use are in retail, customer services, decision making support, state of the art payment systems and online community building.
2. Based on the answer provided by the user, an intelligent tree algorithm will run and 3 best results will be provided from the online database
3.By clicking on each result will be given a summary of the spot/location as well as pictures.

Tab 2:
This section will contain an autocomplete text field which will help the user to have manual search of the tourist spot or location around the world sorted country wise.

3) Users will be able to select travel destinations based on travel paths, hotels, and common places near the location/spot.

5.   APPLICATIONS
1.   AI based chatbot for easier access of all the data.
2.   Pre-booking of all the tourist spots visiting passes.
3.   Bookings of Trains / Airlines.
4.   Booking of cab facilities as and when required.
5.   Pre-booking of Hotels and accommodation.
6.   Budget planning and easier access to the tasks and schedules.
7.   Make recommendations and suggestions for different travel arrangements that are important to you.

6. HARDWARE RESOURCES REQUIRED
1.   Processor:- Intel
2.   Dual Core Hard Disk:-500G
3.   RAM:- 4 GB

7. SOFTWARE RESOURCES REQUIRED
1.   Operating System: MS Windows / Linux
2.   Web browser: Google Chrome
3.   Front-end: PHP, Html
4.   Back-end: Django Framework

8.   SCOPE
1. Artificial intelligence can provide a wealth of knowledge on a variety of topics, including general infrastructure, tourist infrastructure, and so on.

2. Artificial Intelligence (AI) easily addresses customer needs by offering timely information on key factors such as infrastructure facilities, Destination tourism infrastructure facilities, and so on.
 3. Artificial intelligence has infiltrated every part of the travel industry.

4. Reminders and alerts for schedules and appointments come in handy during runtime.

5. You can get a customized and intelligent travel solution tailored to your needs with the aid of this technology.

9.   ACKNOWLEDGEMENT

10.   CONCLUSION

Tourism is currently recognized as a global industry which is highly growing at a high rate like other industries. There are many different activities that occur in tour activities. Our 'AI Based Tour Management System' web based application helps in managing and planning a vacation or a tour with a user friendly environment and work with runtime changes and schedule the same for necessary requirements, the proposed system also enables users a vacation that can be without any time bound restrictions and best fit in budget.

This project can be fully customized with integration with different API's. It has a friendly environment that connects customers willingly. Finally, I can say that this Web Based Application will help to control and handle the tour related activities effectively and efficiently.

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