TOUR RECOMMANDATION APP

V. ADITYA RAM

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ABSTRACT:

In this Android Tour Recommendation Online App Machine Learning Project, the user can make a day plan by selecting his list of places based on his preferences of Food & place type. There can be any number of plans made and all the places are fetched using Google place API and based on Highest rating. The Plan considered your total number of hours added, so that it can calculate your travelling time + time spend on a particular location. The final places can be manually sorted by the user or can use auto sort to get the proper route. The system will give suggestions of places where and when required based on other users plans.

1.PROBLEM STATEMENT:

Touring is a very important part of life. By taking a nap from our daily work life we often want to prefer spending sometime somewhere along a sea coast or on a hill station and beat complete peace. But planning a tour all by ourselves is a very difficult & time-consuming task. Tourism has always been an integral part of many countries' economy across the globe. Therefore, it has become very important to attract different tourists from all over the world, for which we can utilize the vast data available on the internet by using data mining & data science for generating user-friendly results based on one's interest for people surfing for tour planning on the internet. To solve this, I have come up with a Tour Recommendation System which will generate user-friendly preferences & recommendations.

2.MARKET/CUSTOMER NEED ASSESSMENT:

Generally, while planning for a tour, we often prefer taking recommendations from our friends, but the suggestions are often limited to the places they have visited. Also, the suggestions taken from travel agents are sometimes biased as their packages & make money out of them. Furthermore, doing own research over the vast internet for tour planning leaves the user even more frustrated & confused to come towards a definite conclusion as there are tons of websites to browse through on the web. Hence it is necessary to come up with an automated user-friendly solution for tour recommendations for solving this issue.

3.TARGET SPECIFICATIONS AND CHARACTERIZATION:

The rapidly growing usage of the web and its applications has become a major source of user's information available on the internet. This information can be easily utilized to understand different user's-persona based on their internet activity using data mining techniques and thus by identifying their interest we can suggest them various offers based on their preferences. Hence this recommender system can be very helpful in attracting the tourist by recommending them the right options to choose from, thereby increasing the rate of conversion significantly. This tour recommending system will play an important role in generating user-friendly results by analysing the user's online activity and collecting information related to their interests & locations.

4. EXTERNAL SEARCH:

1. https://acropolium.com/blog/ai-and-ml-in-travel-hospitality-top-benefits-usecases/#:~:text=This%20is%20where%20artificial%20intelligence%20%28AI%29%20and%20machine,the%20process.%20In%20this%20article%2C%20we%E2%80%99ll%20look%20at%3A

2.https://pro.regiondo.com/tour-operator-business-model/

3.https://www.researchgate.net/publication/275152218_Constraint-Based_Recommender_Systems

4. https://www.analyticssteps.com/blogs/what-are-recommendation-systems-machine-learning

5.https://www.researchgate.net/publication/322009706_Tourism_Recommendation_Using_Machine_Learning_Approach

5.BENCH MARKING ALTERNATE PRODUCTS:

We have many apps like Make My Trip, Goibibo, Traveloka, Trivago, World mate, Hopper. These are leading Online Travel Applications that provides multiple services such as flight tickets, domestic and international holiday packages, reservations, bus and train tickets, etc. They have more than 100 million users around the world who enjoy exclusive discounts on hotel bookings and all the other services.

But none of these apps give recommendations to the clients who are looking to plan a tour. By implementing my AI or ML tech into the app, we can actually give our clients suggestions based on user's-persona on their internet activity using data mining techniques and thus by identifying their interest we can suggest them various offers based on their preferences. We can play an important role by generating user-friendly results by analysing the user's online activity and collecting information related to their interests & locations, thereby increasing the rate of conversion to using our apps significantly.

7.APPLICABLE REGULATIONS:

1. Review of existing work authority regulations.

2. Protection/Ownership regulations for patent companies.

3. Patents on ML algorithms developed.

4. Ensuring open-source, academic and research community for an audit of Algorithms.

5. Creation of Anti-cheating AI system for the fraud and cheat detection.

6. Laws related to privacy for collecting data from users.

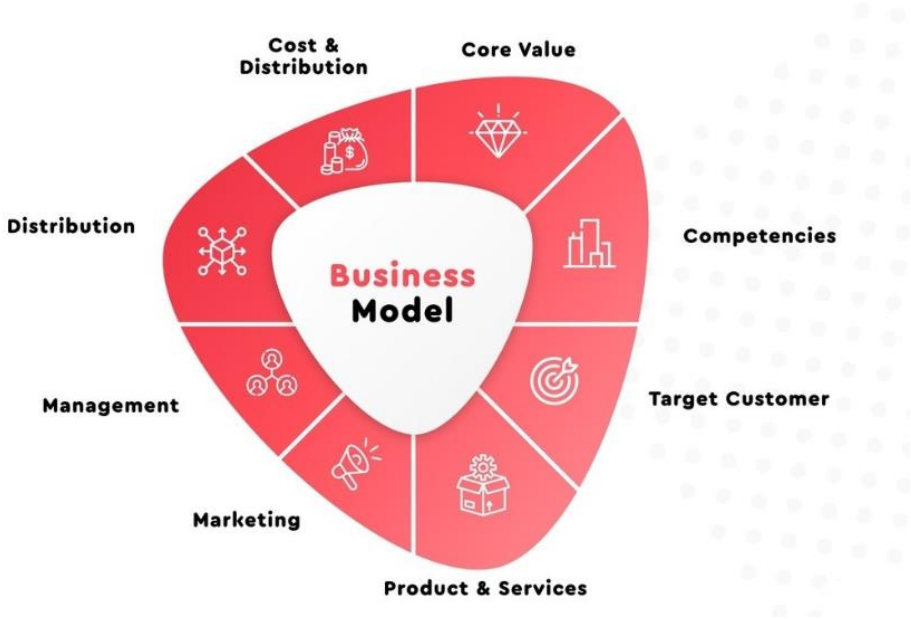
8.APPLICABLE CONSTRAINTS:

1. Data to be obtained to train the model, for each different tourist places.

2. Huge google research to obtain dataset of customers in-order to provide more sophisticated and accurate results, which requires man power.

3. Building the ML model accordingly to give overwhelming suggestions.

9.BUSSINESS MODEL:



The tour operator business plan market research reports will be presented to confirm the mission of the business in order to position it properly within the industry. This usually involves providing safe, reliable and fun sightseeing tours and charter services for visitors. It also presents the development of a message that touring with us is fun comparing with the competitors' weaknesses.

A good operator plan is needed which will describe how to deliver high quality, comfortable, informative services that are tailored to the clients' needs. This part of the business plan offers a complete description of the regular operations of a tour operator business including ticket selling, schedule setting and personnel training.

The tour operator main source of revenues comes from selling tickets/seats on its full service tour and sightseeing vehicles but along with charter services for special occasions and corporate clients. We help the business by providing the recommender system encrypted to increase the attraction of the clients towards the app, we can also increase the revenue by having ties with tourist hotels and services based on the number of people we turn them up to the respective tourist places.

10.CONCEPT GENERATION:

The global pandemic has transformed consumer expectations, increasing the role of AI and ML in the travel and hospitality landscape. More Indians are now booking tickets and hotels online than ever before. Nothing can beat the comfort of being able to plan a trip from the comfort of your home. You can check out the prices and compare them to get the best out of the deal.

Wherever we stand, the challenge is the same: to understand what a new generation of customers wants from your business. This is where artificial intelligence (AI) and machine learning (ML) can make a difference. Developing a business management system that uses AI and ML for travel and tourism can help you predict, market, and deliver services to the right customer at the right time, boosting revenue in the process.

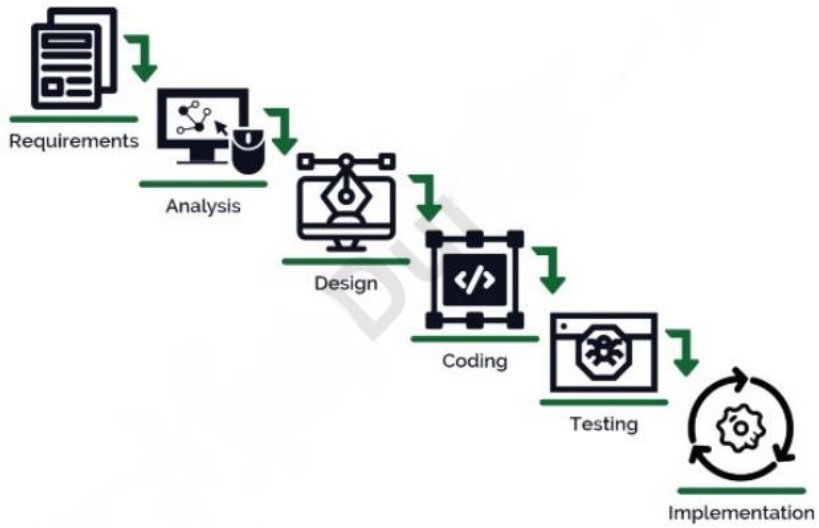
People generate a huge amount of data as they travel and search for destinations, flights, and hotels. This data can include: location, browser, device, session duration, and referral source, previous travel bookings, search inquiries, destination searches, email subscriptions, and other online activities, purchase history and details, and service preferences, rankings, feedback about services, shared photos, geo-tagged locations, and social media comments.AI and ML in travel can gather and process this information to help the business in many ways, this is the idea behind generation of this Tour recommendation App.

11.FINAL PRODUCT PROTOTYPE:

The system comprises of 1 major modules with their sub-modules as follows:

- Register: User can register using personal details along with his preferences for the places.
- Login: User can login into his account using id and password.
- Profile: User can view and update his profile. Preferences also can be updated here.
- Change Password: User can change their current password with new one whenever required.
- Home: Home page comprises of 3 modules;
    - ♣ Day Plan:
        - Select source location.
        - List of places as per his preferences, which can be added.
        - User shall receive a suggestion of any place using a recommendation algorithm.
        - Sort the Plan Manually or use TSP Algorithm to sort it.
    - ♣ Explore Place:
        - Select source location.
        - Search Places as per his preferences
    - ♣ Recommendations: Recommendations of previous or similar places.
- Saved Plan: User can see a list of all his saved Plans &delete them if he wishes to

The waterfall model is a classical model used in system development lifecycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in downward fashion. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirement. The waterfall approach is the earliest approach that was used for software development.



12.CONCLUSION:

Data science and AI in the travel and tourism sector can help companies deliver tailored services, automate recurring tasks, and consequently boost revenue. However, to take advantage of this technology, you need a reliable and secure platform capable of gathering and analysing large volumes of data. Implementing AI in the travel and tourism industry can give you customer behaviour insights to tailor deals to a customer's family status, the purpose of visit, favourite cities, and preferred hotel locations. This multiplies your chances of catching their attention. Developing a business management system that uses AI and ML for travel and tourism can help predict, market, and deliver services to the right customer at the right time, boosting revenue in the process.