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| NAKULESH JAYAKRISHNAN | (17202012) |
| GAURI DESHPANDE | (16102046) |
| AKANKSHA KOSHTI | (16102011) |

TITLE: PERSONALIZED ITINERARY RECOMMENDATION SYSTEM**INTRODUCTION:**

A personalized itinerary recommendation system uses machine learning to dynamically recommend a famous tourist hotspot across India as well as curate a personalized itinerary according to the user's interest. It takes user input such as the budget of their travel, day and date of travel and number of adults and children travelling etc. Based on the interest of the user, various similar places will be recommended along with a number of personalized itineraries for that particular place, from which the user can choose an itinerary of his/her choice. The recommendation system also recommends a convenient mode of travel, keeping in mind the budget of the traveller.

OBJECTIVES:

1. To make it convenient for the users to pick a travel destination and itinerary of their choice.
2. To curate a travel plan according to the user's preferences, making the user's budget the center of attention.

MODULES:**FEATURES:**

- Chatbot interface.
- Travel destination recommender.
- Personalized itinerary generator.
- Users have the freedom to choose from a variety of travel destinations and itineraries recommended to them.

TECHNOLOGY STACK:

- Tensor flow
- SkLearn
- Firebase(json)
- DialogFlow
- Jupyter Notebook

WORKING:

- The first step would be to collect the data explicitly from the user. For this, the user would have to enter the required minimal attributes such as date of travel, number of adults and children travelling, the budget etc.
- Based on these attributes, keeping a special focus on the budget, the user will be recommended many similar places of interests which the user can choose from.
- Along with the place of travel, the user will also get many personalized itineraries for that specific place based on either adventure, sightseeing or relaxation, from which the user can pick the desired itinerary.
- The users will have to interact with a chatbot interface in order to input their data.
- The chatbot uses Dialogflow for recognizing the keywords that the user inputs.
- It then recommends a set of destinations according to the users interest as well as various itineraries from which the user can choose from.
- The working of the recommendation system is in such a way that the user's budget as well as his/her interest form the foundation of the whole system.

DURATION OF STUDY:

Around one year to implement the entire project.

REFERENCES:

K. Kesorn, W. Juraphanthong and A. Salaiwarakul, "Personalized Attraction Recommendation System for Tourists Through Check-In Data," in *IEEE Access*, vol. 5, pp. 26703-26721, 2017. doi: 10.1109/ACCESS.2017.2778293