Project Proposal: Virtual Travel Assistant

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April 3, 2020

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Goals For my project, I will be creating an algorithm to help people plan for vacations. With this algorithm, travelers will be able to enter certain cities and countries that they want to vacation in, the amount of time they would like to stay in those cities, how they would prefer to travel, how much they would like to spend per night on housing, etc.. The algorithm will then parse real market data, and develop the cheapest possible plan based on the travelers input. Ultimately, I would like to expand this tool to give the option of whether the user would like a high-class vacation, middle-class vacation, or cheapest possible option. This will provide a wider range of options to the user.

How Will This Work? In order to gain access to real market data, the program will use a combonation of APIs and web scraping. The web scraping will be executed using jsoup which is a library that allows for web scraping based on an input URL that can be customized with search criteria. The API approach will tield results since these APIs are connected to real-time market data for listings and travel options (such as flights and car rentals). Both of these techniques will yield different results based on user input. After this data is retrieved a series of algorithms and logic will be used to parse the data and return the best possible option for the user. The algorithm will also compare listings from a few different housing companies in order to ensure that the results are consistant and helpful. Using a variety of input criteria, the tool will have the ability to output a significant number of travel plans, and there will be no hard coded values that will provide output to the user.

1 References

- https://jsoup.org/cookbook/introduction/parsing-a-document
- https://stevesie.com/apps/airbnb-api
- https://www.partners.skyscanner.net/affiliates/travel-apis