Smart Travel App

**Project Team:** Dominique Villarreal, Enrique Garcia, Jose Santos

**The Proposal:** To build an app that personalizes travel destination recommendations based on user preferences to help solve the age old question of, “where should I travel to”.

**The Purpose:** To simplify a travelers destination options and improve their selection experience

**The Scope:** In project 4 we aim to construct a machine learning algorithm that can personalize travel recommendations based on user preferences and multiple data sources such as: travel, flight, location, experiences/events, demographic information, etc.

The website then recommends one of the three locations and the top 10 Activities and Food Locations based on the user’s selected preferences

**The Cities:**

Miami, Florida = Sunny/Beach/Outdoors

Denver, Colorado = Outdoors/Mountain/Snow

New York, New York = Urban/Museums/Subways

**Example:**

Login to website

Prompted to create username password

User chooses preferences (Sample List [final tbd])

* Location
* Hot
* Cold
* Beaches
* Mountains
* Urban
* Subways
* Trains
* Taxi/Uber
* Museum
* Winery
* History
* Food
  + Vegetarian
  + Meat Lover
  + Chinese
  + Fish
  + Mexican
  + Italian
  + Burgers
* Activities
  + Hiking
  + Swimming
  + Tours
  + Walking
  + Wine Tasting
  + Animal Life

**Working Data:**

Necessary data might include:

* Travel Data
* Flight Data
* Location Data
* Experience Data
* User Data

Potential Data Sources:

* <https://www.tripadvisor.com/developers> (tripadvisor first 5,000 api free every month)
* <https://developers.google.com/travel/impact-model> (google flight data flights in the next 11 months only includes flights)
* <https://rapidapi.com/collection/travel-api>
* <https://rapidapi.com/search/travel> (pulls multiple apis to search through)
* <https://www.condorferries.co.uk/travel-statistics-by-age-group>
* <https://rapidapi.com/Distance.to/api/distance/> (calculates distances between addresses, postcodes, and cities for airline, car, and maritime routes.)
* <https://rapidapi.com/logicbuilder/api/instagram-data1> (instagram data)
* <https://rapidapi.com/DataCrawler/api/airbnb19/> (airbnb)
* <https://rapidapi.com/apidojo/api/the-fork-the-spoon/> (foods/ restaurants to try when traveling)
* <https://rapidapi.com/sharemap-sharemap-default/api/travel-places/> (List cities, natural parks,beaches, other travel destinations, airports and railway stations)
* Yelp data <https://docs.developer.yelp.com/reference/v3_business_search>
* <https://docs.developer.yelp.com/docs/fusion-intro>

**Analysis and Visualizations:**

TBD

Potential Visualizations:

**The Tools:**

Python: Pandas & Matplotlib and/or JSON & API’s to explore different data

Tableau - to create visualizations of our data

SciKitLearn - or others to create the necessary algorithm for personalizing recommendations

HTML - If time permits, we’ll proceed to build out the U/I using HTML.

Github Repository:

PowerPoint - for final presentation

**Requirements:**

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