# Introduction

Many businesses have been affected by the pandemic. Lockdowns and quarantines have been required to flatten the curve on new cases and as such, travel plans have been put on hold. While this may be the least of our concerns now, several businesses that rely on travel and tourism have been severely negatively affected. Among the hardest hit are travel agencies. As such, my target audience for this project are travel agencies. They can use the resulting simple engine or a variant of it to make recommendations to future vacationers which will hopefully help bolster the economy of the target countries.

# Problem

The first travel after the pandemic will be important as this could impact the desire for any succeeding travels. To facilitate a pleasant experience once a vaccine is created and the world is open again, travel agencies can implement a recommendation engine that considers people’s preferences in a location.

# Data

To create this engine in Python, we would need the following data:

|  |  |  |
| --- | --- | --- |
| **Data** | **Transformation** | **Source** |
| List of Countries, Capital Cities, and their location | Table from page to Pandas data frame,  Coordinates to correct format for Foursquare query | https://lab.lmnixon.org/4th/worldcapitals.html |
| Top Venues per Location | Cleanup of Categories,  Matrix format containing count of each category | Foursquare API |
| Happiness Index of each country | Table from page to Pandas data frame | https://en.wikipedia.org/wiki/World\_Happiness\_Report |
| Preferred types of venues | Input as List in Python | User Input |
| Relative importance for each venue type | Input as List in Python | User Input |

The happiness index of each country is where I will do initial testing and confirmation that the environment impacts happiness.

The user inputs will be used to generate a 'score' for each place. This is ideally customizable depending on the client’s preferences.