**Determining the optimal locations for new hotels in Barbados**

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**Introduction**

The island of Barbados in the Caribbean is currently undergoing an economic structural adjustment, supervised by the International Monetary Fund. One of the sectors expected to fuel growth in the economy is the tourism sector. To this end, an expansion of the room stock in the island is needed to accommodate any increase in long-stay visitor arrivals. Three hotel projects in particular are being examined but have been stalled due to challenges associated with their locations.

External investors looking to invest in setting up a hotel property in Barbados would need to know where are the best areas on the island for such a project. Depending on whether it is an all-inclusive property or one that depends on having certain amenities in the area, this is information and data that investors will need before making the investment. It will also provide much needed rooms to facilitate more long-stay visitors to the island.

**Data**

In this exercise, I will be making calls to the Foursquare API to search for a specific type of venue, to explore a particular venue, to explore a geographical location, and to get trending venues around a location. I will also use the visualization library, Folium, to visualize the results. The following necessary libraries will also be imported:

Requests - library to handle requests

Pandas - library for data analysis

NumPy - library to handle data in a vectorized manner

Random - library for random number generation

Nominatim (from the GeoPy library) - module to convert an address into latitude and longitude values

IPython - libraries for displaying images

json\_normalize - library for transforming a json file into a pandas dataframe

Examples of use of Foursquare location data:

**Samsung**

Using Foursquare's database of more than 105 million places, Samsung allows users to geo-tag their photos with detailed info about a destination, while also serving up contextually relevant locations for those who are searching for a place to eat, drink or explore.

**Airbnb**

The world's largest community-driven hospitality company relies on the Places API to surface curated photos and other place-related content in users' guidebooks.

**Uber**

The global ride-hailing giant enables users to search and find the destinations they want to go using Foursquare's Places Database of 105+ million places around the world.

**Methodology**

Firstly, the Barbados Hilton Hotel was chosen as the starting point of the analysis. This property is located at the southwest end of the island just outside of the capital, Bridgetown. To obtain the precise coordinates of the property, a call to the Foursquare API was made using my Foursquare Developer account. Then, the specific category of “Italian Food” was chosen to determine how many such venues can be found within a 5km radius of the hotel. The venues were then explored further to determine their ratings and tips. Using the restaurant with the highest rating, I then explored the area around it within a 500m radius to determine what other venues of interest existed in the area.

The process was then repeated for a more remote hotel, The Crane Hotel, located at the southeast end of the island. To have a direct comparison, I checked for the number of Italian restaurants located within a 5km radius of the hotel, as well as the number of venues of interest within a 500m radius.

**Results**

The specific category of “Italian Food” was chosen to determine how many such venues can be found within a 5km radius of the Hilton Hotel. Two restaurants were found within 146 metres of each other. The venues were then explored further to determine their ratings and tips. The one called “Mama Mia Italian Deli & Pizzeria” had a rating of 6.4 while the other one, “Buzo Osteria Italiana” had a much higher rating of 8.8. The tips for this restaurant were also quite good. Using this venue, I then explored the area around it within a 500m radius to determine what other venues of interest existed in the area. It turns out that there were 11 venues of interest in the surrounding area in various categories, including other hotels and resorts, a coffee shop, a horse racing track, a bar, and a barbeque joint.

The process was then repeated for a more remote hotel, The Crane Hotel, located at the southeast end of the island. Firstly, no Italian restaurants were found within a 5km radius of the hotel. Secondly, there were 13 venues of interest found within a 500m radius of the hotel. Out of these, 9 venues are situated on the compound of the hotel itself.

**Discussion**

For the hotel situated closer to Bridgetown, The Hilton, there are various venues and activities for the visitor to explore outside of the hotel in the immediate area. In fact, the majority of the hotels on the island are situated along the west and south coasts where there are many trending places to enjoy. Due to the limited space, it is not recommended that any new investors in hotel properties set up an operation along these coasts.

On the other hand, the Crane Hotel is an all-inclusive hotel with 5 restaurants on its premises, along with many other shops and amenities. Guests staying at this resort do not have to be concerned about the lack of interesting venues in the area around the hotel as everything is catered for in-house. In fact, there are no other major hotels on the interior of the island or on the east coast. These are prime areas to start a new hotel project as long as the investors are willing to include all the necessary amenities on the property itself.

**Conclusion**

As a result of the foregoing analysis of the data for two hotels situated in specific locations on the island, it is recommended that any new hotel projects be placed in the interior and eastern parts of the island where there is more available land. As there are not as many activities in these areas for visitors to participate in as on the west and south coasts, these projects must include at least all of the amenities found in a hotel such as the Crane Hotel, e.g. shops, restaurants, swimming pools and sporting facilities.