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Walt Disney World Resort Hotel Restaurant Locations

IBM Data Science Capstone Project

Introduction

Walt Disney World generally classifies restaurants as table service and quick service. Table service restaurants have a wait staff, take reservations, and include buffets and character meals. Quick service restaurants are more commonly known as fast food restaurants, and food is ordered, and usually paid, at a counter or station.

Quick service restaurants at Walt Disney World can be crowded with long lines, and table service restaurants often have little availability and/or long waits to be seated.

Walt Disney World has over 25 resort hotels that are owned and operated by the Walt Disney World Resort.

With some analysis, executives could have data to decide if quick service restaurants need to be added to the Walt Disney World Resort hotels. Revenue may be increased if more restaurants are needed and added in prime locations, giving guests access to quick, convenient meals and more time out of lines and in shops, which will also increase revenue.

Data

To solve the problem, data needed will include information about resort hotels, such as location and resort area, and information about the nearby restaurants.

To get this information, three types of data will be needed.

1. Data about resort hotels will be scraped from this website (https://en.wikipedia.org/wiki/Walt_Disney_World).
2. Longitude and latitude information will be needed for the resort hotels. This information will be retrieved using the resort hotel address from this website (https://touringplans.com/walt-disney-world/hotels/addresses).
3. The number and types of venues near the resort hotel, which will be accessed using Foursquare location data, will be used.

Methodology

Using the wikipedia web page, a list of the resorts with information about the resort, including theme, number of rooms, and resort area, were retrieved. Data was then saved to a csv file.

Next, using addresses of resort hotels from website, a second table was created with latitude and longitude and saved to a second csv file.

The csv files were merged into one table that contained the hotel resort name, resort area, and latitude and longitude, along with other information.

I decided to focus on the resort hotels in the Epcot resort area.

Using Foursquare and the latitudes and longitudes for each resort hotel, I retrieved venues near the resort hotels and ordered the venues into the ten most common for each resort hotel. I started with a radius of 500 meters and increased the radius to 1000 meters to get a more diverse list of venues.

I used K means clustering to examine clusters. After experimenting with different values for k, I determined that the best value for k is 3.

Results

Clusters 1 and 3 contained one resort hotel each, while Cluster 2 contains five of the seven resorts. Looking at the map, this result seemed reasonable.

Discussion

Looking at restaurants, there seems to be a lack of cafes/coffee shops and fast food restaurants. Both of these options are very appealing to guests that would like something quick to move to other activities or guests that want a quick meal in the evening.

The only two hotel resorts with cafes or fast food restaurants are Disney's Carribean Beach Resort (cluster 1) and Disney's Riviera Resort (cluster 3). Disney's Beach Club Resort, Disney's Yacht Club Resort, Disney's Beach Club Villas, Disney's Boardwalk Inn, and Disney's Boardwalk Villas (cluster 2) lack these dining options in the top ten nearest venues.

Conclusion

The five hotel resorts in cluster 2 total over 2300 rooms, so there is opportunity to provide quick, convenient dining to a number of guests. Looking at a map, Disney's Beach Club Resort, Disney's Beach Club Villas and Disney's Yacht Club Resort total nearly 1500 rooms and are on one side of Crescent Lake, while the other two are on the opposite side, totaling around 900 rooms.

Two quick service restaurants are recommended, one near Disney's Boardwalk Inn, which would also appeal to visitors to Disney's Boardwalk entertainment district, and one near Disney's Beach Club Resort, which could serve the larger number of rooms.

The same technique can be applied to the other resort areas - Magic Kingdom, Animal Kingdom, and Disney Springs.

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For further analysis, additional helpful information, such as the serving and seating capacity of the existing quick service restaurants and average room capacity per resort, would be helpful.