Choosing a seaside holiday destination

Introduction

I will use the Foursquare location data to analyse the different merits of a number of coastal holiday resorts in the UK. This may interest any tourist board wishing to advertise their town as a place to visit or simply a holiday maker looking to make a choice about where to spend their summer. It could also be of interest to travel agents organising trips to certain resorts and hotels looking to attract custom.

Data

To conduct this investigation I will be using the location data from Foursquare along with the venue names and categories. I will use maps, clustering and graphs to draw conclusions about which venues offer the best holiday destination. For this report I have picked six coastal resorts in the UK; Skegness, Scarborough, Southport, Weston-super-Mare, Newquay and Torquay and will use them as a test case for how the analysis will work. I will collect data on the ~100 venues closest to the centre of each location.

Methodology

The analysis will use a range of techniques to ascertain which locations provide the best holiday destination. It will focus on how best to utilize the data points from derived from Foursquare, namely: latitude/longitude and venue name and category details.

The analysis will primarily focus on three aspects:

- The proximity of the venues to the centre of each location.
- The number/proportion of each type of venue in each location.
- Similarity between the different locations.

Results

The first part of the analysis focuses on the location of the points of interest. The more points of interest there are close to the centre of the resort the better the destination will be for a holiday. To examine this I plotted maps of each location with the venues as coloured dots on the map (see jupyter notebook for maps). This was a simple but effective way at of determining which venues had the most attractions close by and would be the most interesting to visit. From this it can be seen that Skegness, Southport and Weston-

super-Mare have very few attractions and would not be suitable for people looking for active holidays.

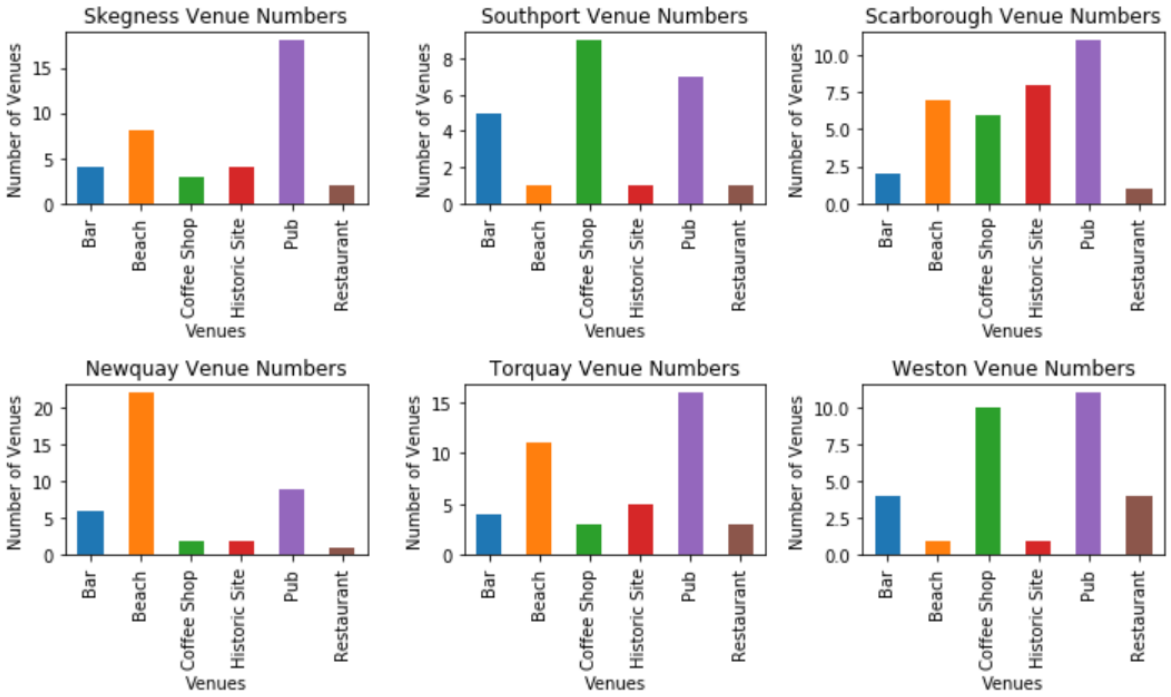
I then did one-hot encoding and clustering on the venues in each location. The one-hot encoding shows what proportion of the venues at each location fall into which categories. This allows the holiday-maker to judge which location would best suit them based on what sort of attractions are common at that location. For example if you wish to have a wide selection of Pubs to choose from the Skegness is a better option than Southport.

```
----Skegness----
               venue  freq
0                Pub  0.18
1              Beach  0.08
2               Café  0.07
3               Park  0.07
4  Fish & Chips Shop  0.05


----Southport----
         venue  freq
0  Coffee Shop  0.09
1         Café  0.08
2          Pub  0.07
3         Park  0.05
4          Bar  0.05
```

I then clustered the location into three buckets. Although this does not give too much direct information on what each location offers it does offer a comparison between which venues are similar. This shows the potential holiday-maker which venue might be similar to another they have previously visited.

I also plotted bar charts of the number of particular categories of venues at each location. This will give another view on how much choice of venue category each location provides. From this we can see that Newquay has the best selection of beaches while Southport has the best selection of coffee shops.



Discussion

From considering all these analyses it would appear that Scarborough, Newquay and Torquay offer the most attractions in their local vicinities and would most likely provide the best holiday destination. Depending upon which sort of attraction the holiday-maker is most interested in they can decide which location would most suit them.

Conclusion

The analysis provides a fairly quick and simple method of distilling the essential factors which someone might wish to base a decision on where they want to go on holiday. Some of the locations had very few venues near-by indicating that Foursquare may not have comprehensive data on those locations.