



Berlin - Tourist Guidance

Nearby Popular Destinations of the Tourist Sight

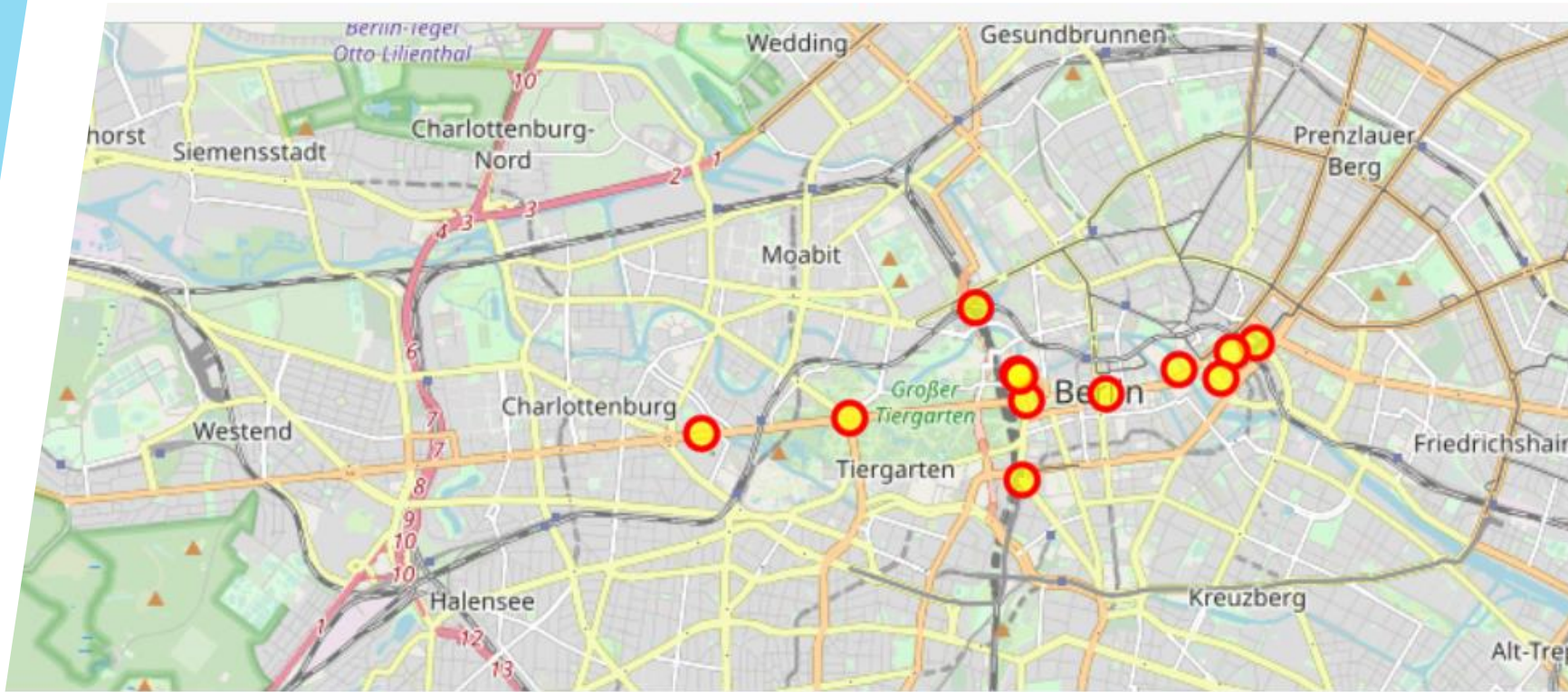
- ▶ It helps the visitors to explore the tourist sights along with the famous places around it.
- ▶ Knowledge of the famous places to eat, to shop, to have fun is an added advantage in the visit.
- ▶ Segmentation and Clusters helps to identify the places and the ease of accessibility of the facility.

Data Acquisitions

- ▶ The list of the tourists sights is scraped from the website :
['https://simple.wikipedia.org/wiki/Berlin'](https://simple.wikipedia.org/wiki/Berlin)
- ▶ Location coordinates are extracted using the geocode requests.
- ▶ For each tourist sight, 10 most popular venues are extracted for the following category: Food, Fun, Coffee, Shop, Club using the API calls to Foursquare.com.
- ▶ The data pertaining to the problem is extracted as no such data was found.

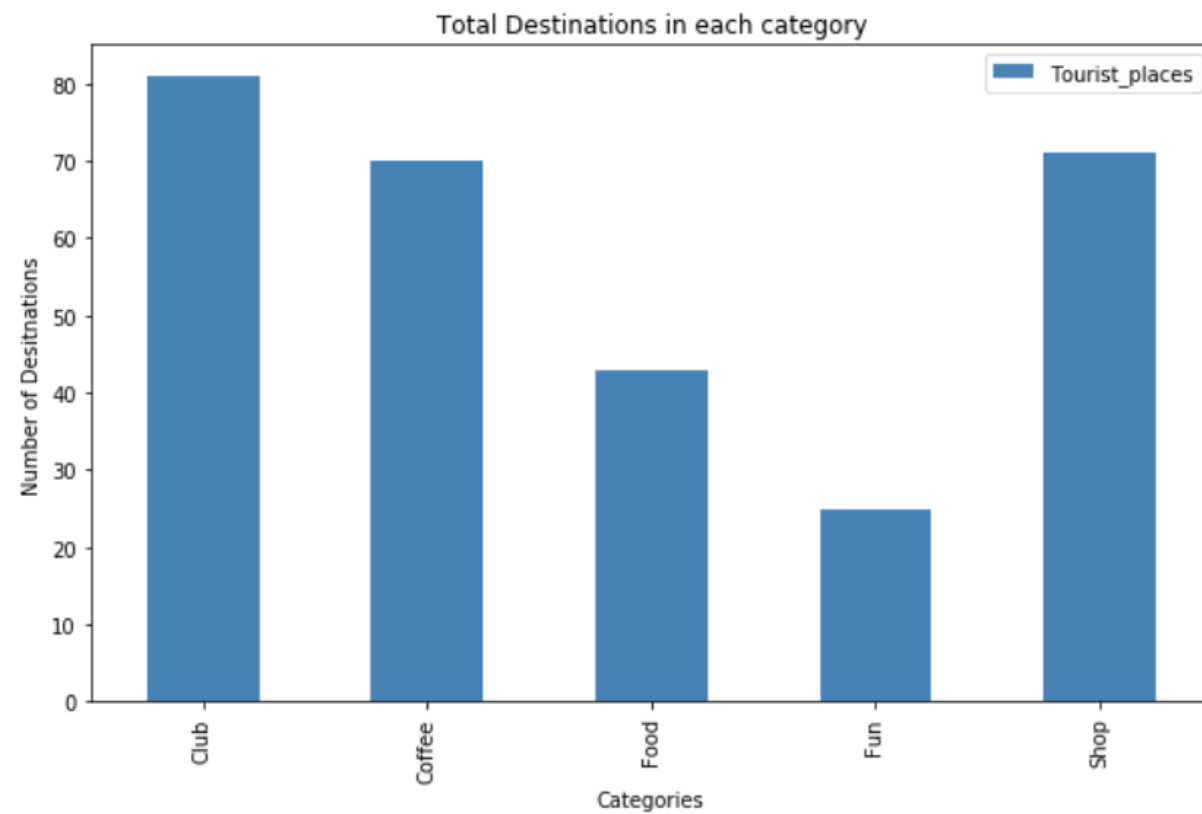
Data Collection

- ▶ The website was scraped using the BeautifulSoup4 library to parse the data in html format.
- ▶ 12 tourists sights were extracted from the website.
- ▶ The location coordinates were obtained for the 12 sights.
- ▶ Each sight was explored for 10 destinations for 5 categories.
- ▶ A total of 290 places were extracted that were popular and also near the tourists spots.



Locating the 12 Tourist Sights on Berlin Map

Total Number of Destinations Collected for each Category

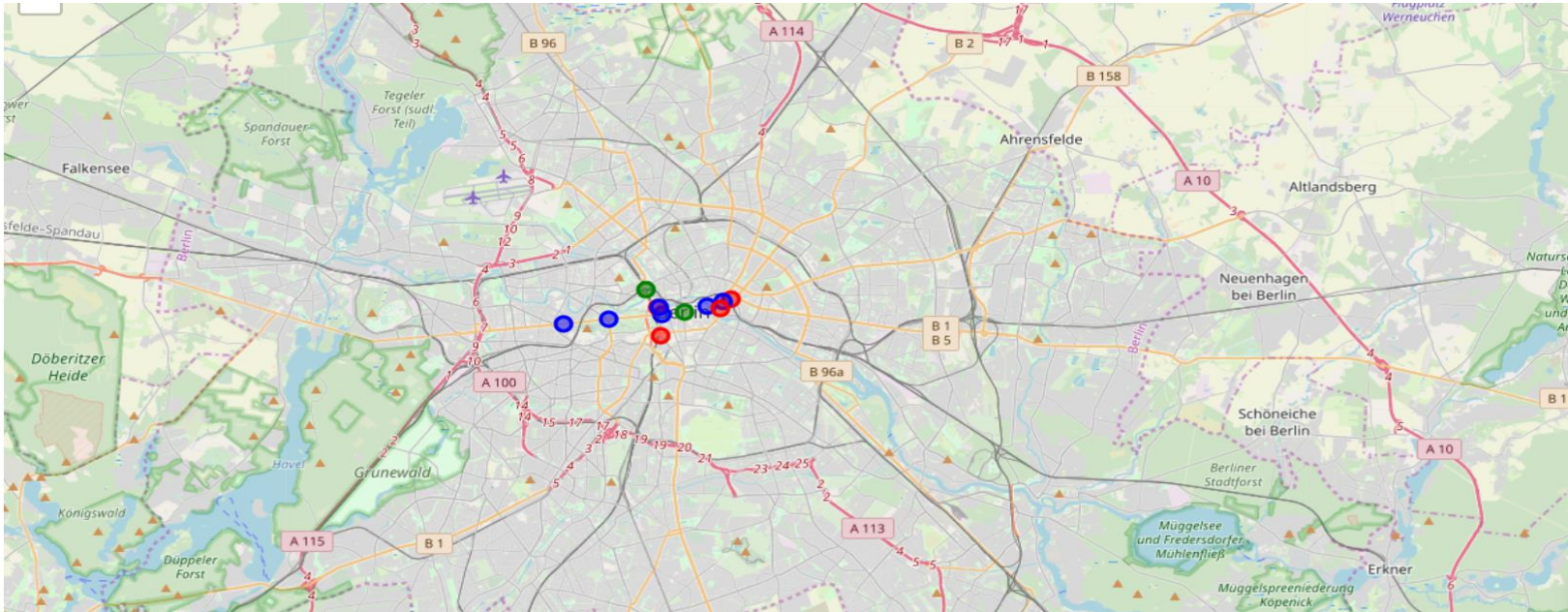


	Category	Tourist_places
0	Club	81
1	Coffee	70
2	Food	43
3	Fun	25
4	Shop	71

Collected Information of Neighbouring Places

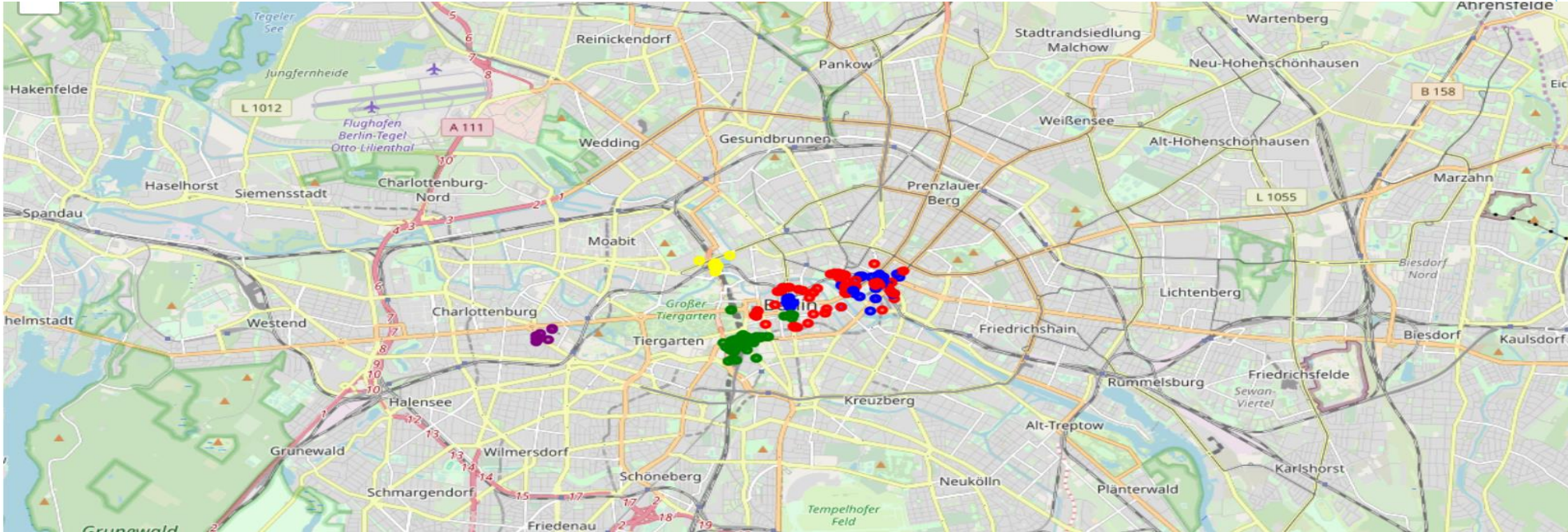
	Tourist_places	Category	Retrieved_Category	Latitude	Longitude	Place_Name	Place_Address	Place_Distance (in m)
0	Alexanderplatz	Food	Asian Restaurant	52.521394	13.410380	anan - Asia Fine Food	Alexanderplatz	198
1	Alexanderplatz	Food	Festival	52.515901	13.409349	Coca Cola Food Festival	Molkenmarkt 2	695
2	Alexanderplatz	Food	Food Court	52.518308	13.415845	Foodcourt	Grunerstr. 20	412
3	Alexanderplatz	Food	Asian Restaurant	52.522110	13.413427	SAMUI fine asian food	U-Bhf. Alexanderplatz U2	49
4	Alexanderplatz	Food	Bar	52.521240	13.414249	Flemingo Fresh Food Bar	Berlin	81
5	Alexanderplatz	Food	Sandwich Place	52.521444	13.411424	Cuccis	Dircksenstr. 2	128

Clusters based on One Hot Encoding of Retrieved_Category



- Data could not produce distinguishable clusters based on the category type of the collected information of the places.

Clustering using the places explored near the sights



- ▶ Five clusters were defined.
- ▶ Second and third cluster overlap at few instances.
- ▶ Few of the tourist sights are almost near each other location and hence the places nearby tend to overlap.

Conclusion and Future Suggestions

- ▶ Information about the popular destinations around the sight adds to the experience.
- ▶ Clusters were well-defined with a few instances of overlapping.
- ▶ Locations in the centre are having more of the options compared to the sights away from the city centre.
- ▶ More categories like - public transportation, hotels, public toilets, will give more support to the visitors.