The Battle of Neighborhoods: Pandemic Friendly Metro Stations in Berlin

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Which metro stations in Berlin are located in neighborhoods that are more convenient and safer for living in during episodes of pandemics?
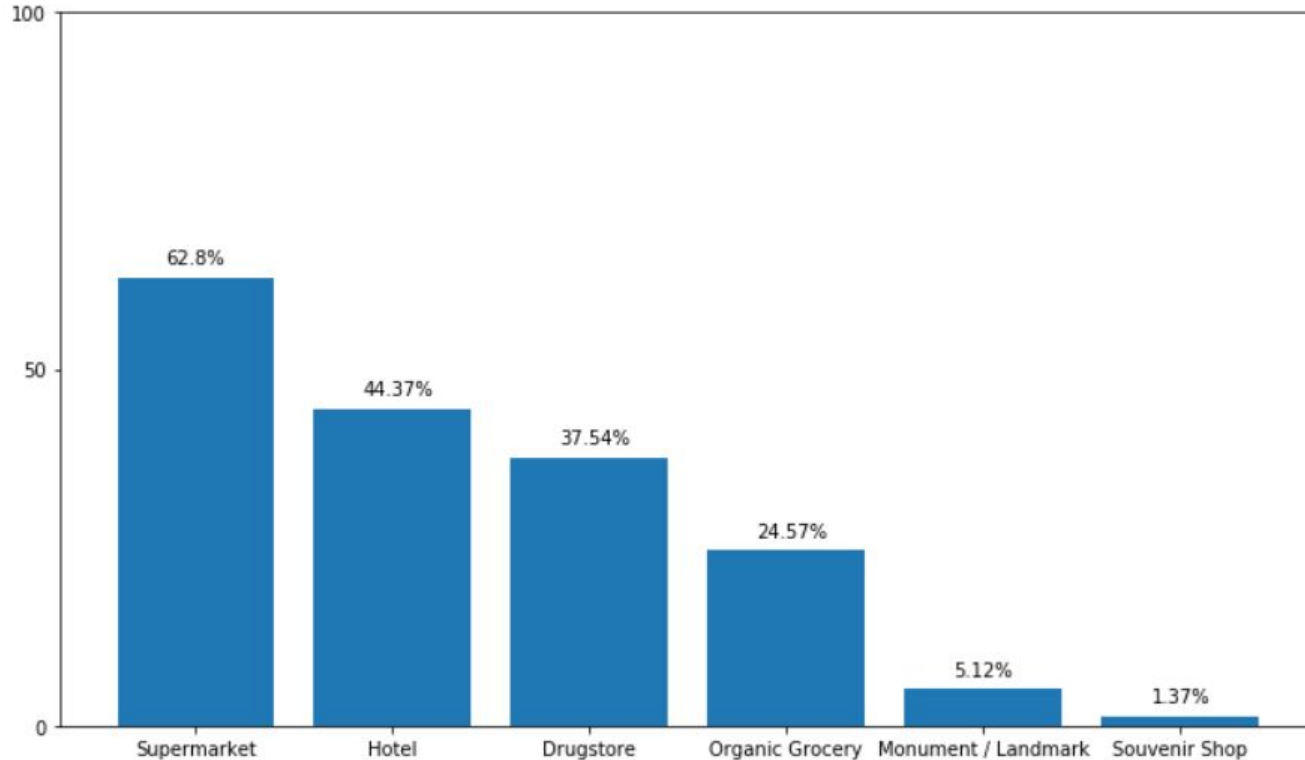
Data sources

- Foursquare API
- Berliner Verkehrsbetriebe

Methodology

- K-means clustering method
- Six features from Foursquare
  - Essential venue types: Supermarket, Organic Grocery, Drugstore
  - "Risky" venue types Souvenir Shop, Monument / Landmark, Hotel

Descriptive stats: proportion of metro station containing selected venue types
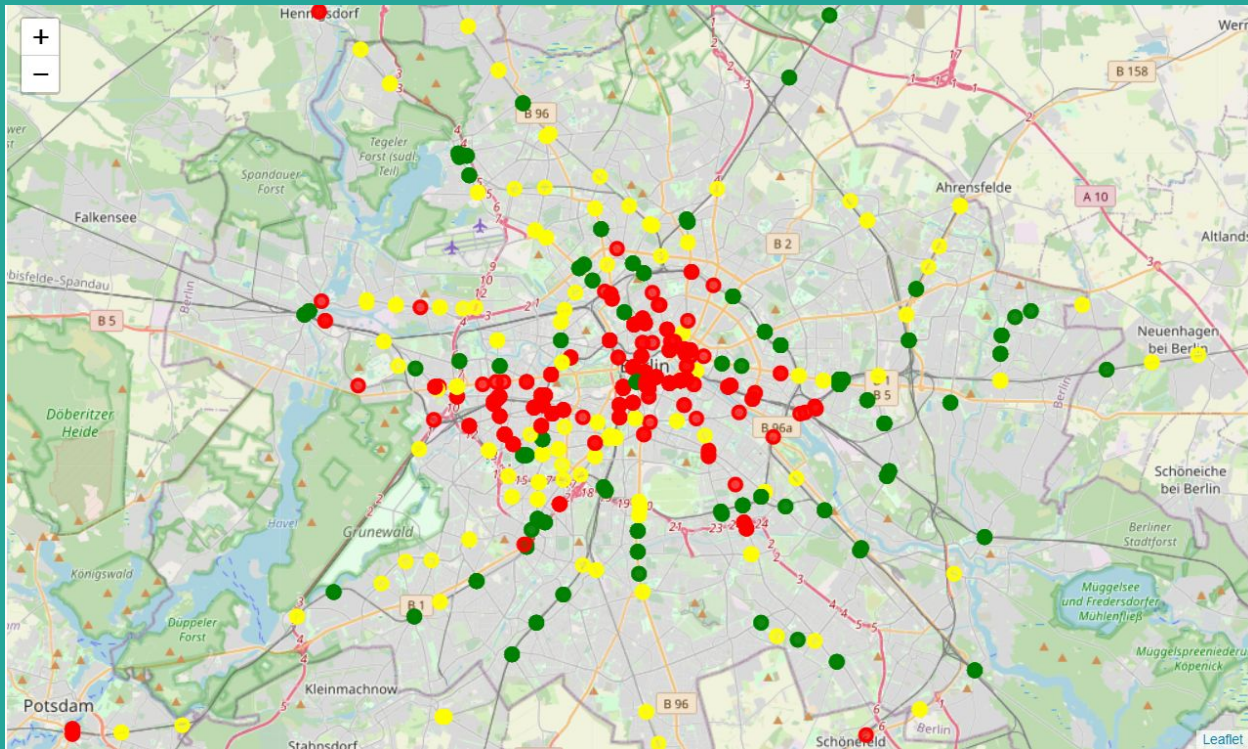
Three clusters of neighborhoods: 0 - safe and medium convenient, 1 - risky and less convenient, 2 - medium risk and most convenient

Cluster Labels	Drugstore	Hotel	Monument / Landmark	Organic Grocery	Souvenir Shop	Supermarket
0	0.000000	0.333333	0.000000	0.092593	0.009259	1.518519
1	0.311927	1.963303	0.155963	0.403670	0.027523	0.073394
2	1.355263	0.355263	0.013158	0.328947	0.000000	1.750000

Interactive map

Available at https://silkroady.github.io/Coursera_Capstone/map.html

Conclusion

- Data limitation emanating from the Foursquare API call limit may have caused possible errors in clustering
- Nevertheless a useful shortlist of neighborhoods for those searching for more convenient and less risky areas of Berlin