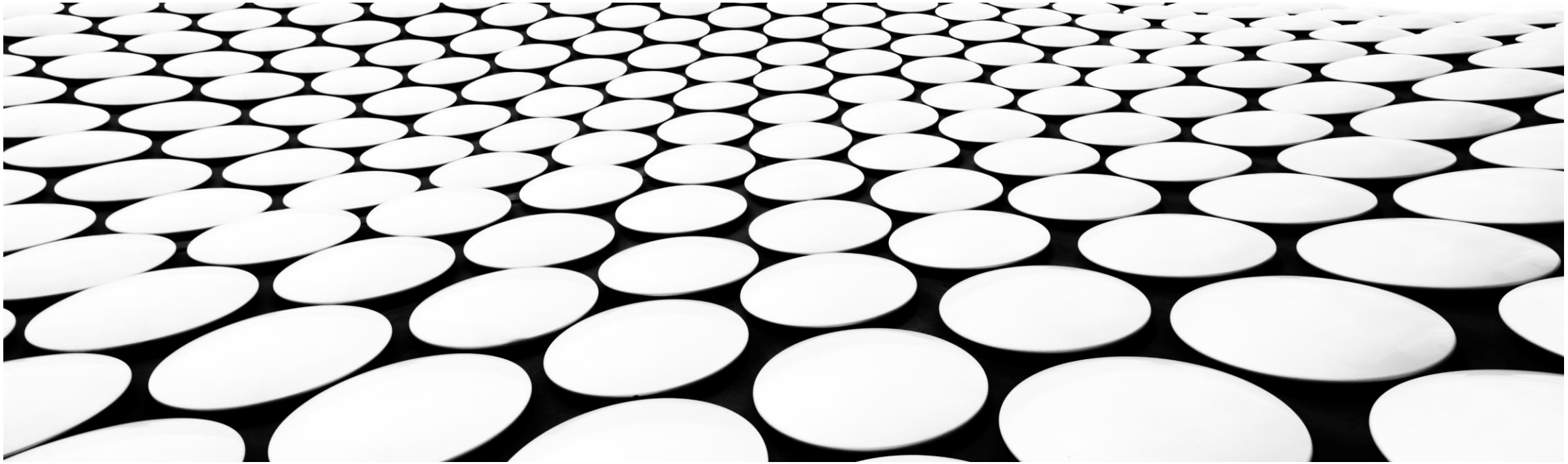
EXPLORING FOOD VENUES IN LONDON

IBM DATA SCIENCE COURSE PROJECT



DATA ACQUISITION

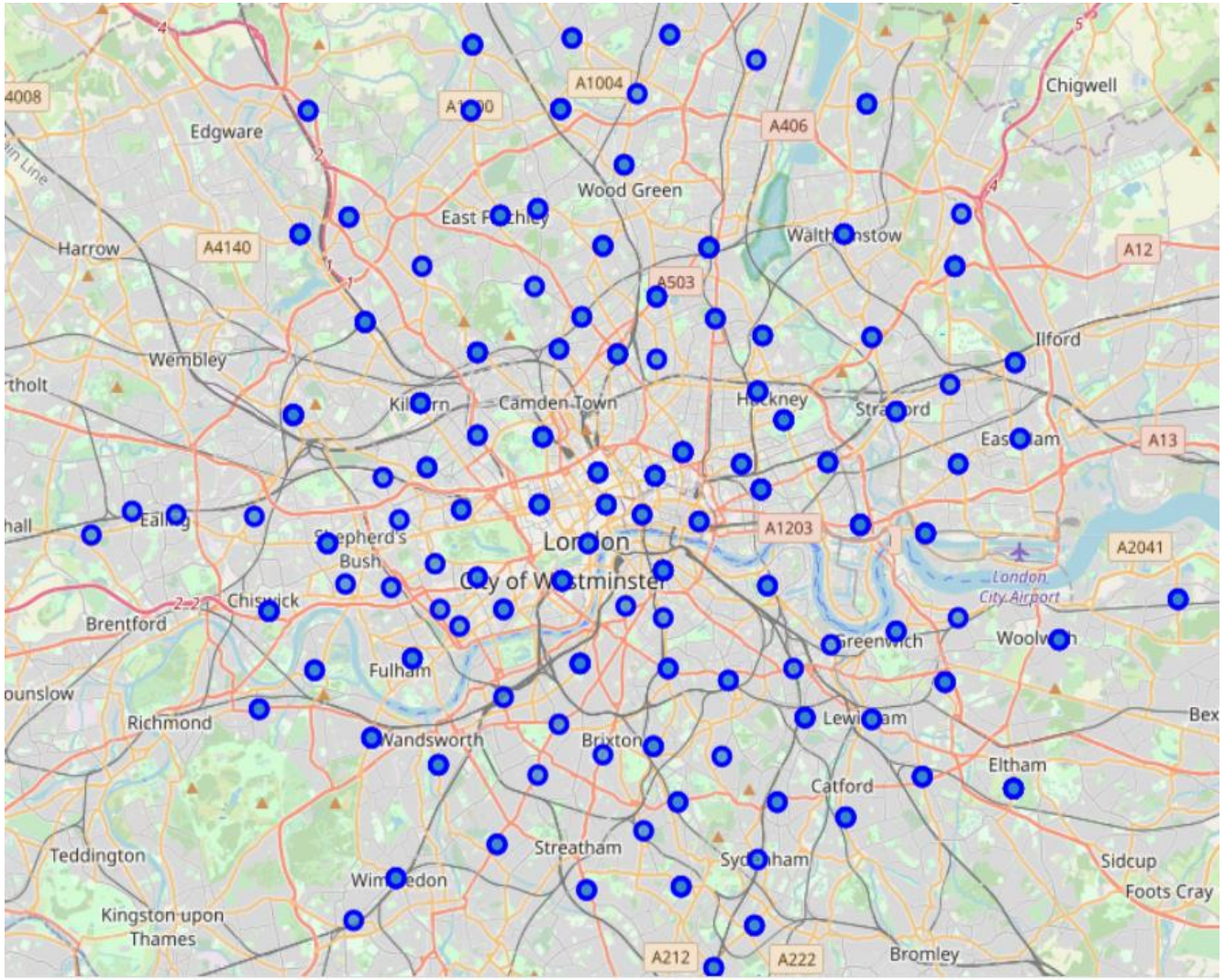
- London Dataset [Neighborhood, Borough, Post Town, Postcode, Latitude, Longitude]

	Neighborhood	Borough	Post Town	Postcode	Latitude	Longitude
0	Abbey Wood	Bexley, Greenwich	LONDON	SE2	51.49245	0.12127
1	Acton	Hammersmith and Fulham	LONDON	W3	51.51324	-0.26746
2	Aldgate	City	LONDON	EC3	51.51200	-0.08058
3	Aldwych	Westminster	LONDON	WC2	51.51651	-0.11968
4	Anerley	Bromley	LONDON	SE20	51.41009	-0.05683

- Foursquare API calls
  https://api.foursquare.com/v2/venues/explore?&client_id={}&client_secret={}&ll={},{}&v={}&categoryId={}&radius={}&limit={}

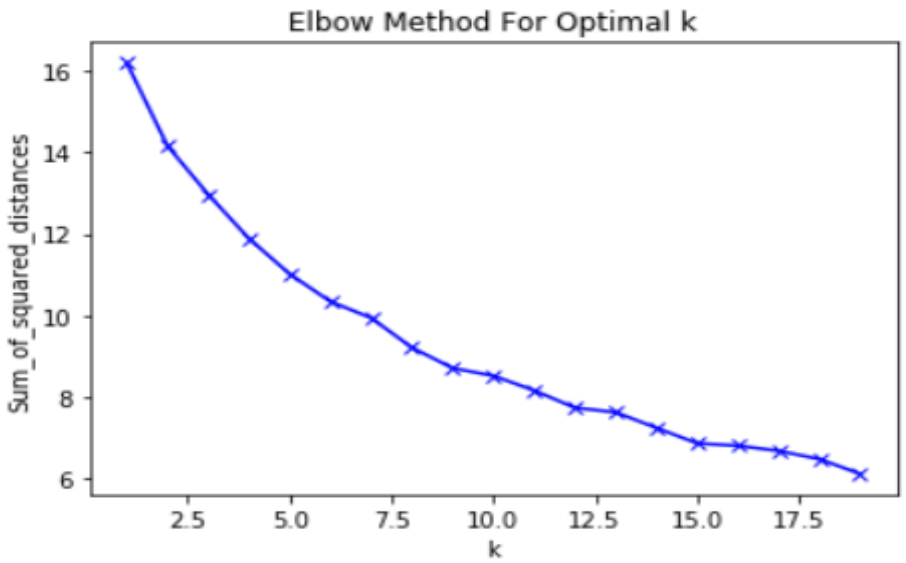
	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Abbey Wood	51.49245	0.12127	Greggs	51.490164	0.121305	Bakery
1	Abbey Wood	51.49245	0.12127	Taj Mahal Indian Restaurant	51.491146	0.120691	Indian Restaurant
2	Abbey Wood	51.49245	0.12127	Abbey Cafe	51.489754	0.120822	Café
3	Abbey Wood	51.49245	0.12127	Nom Nom Noms	51.493540	0.109896	Fish & Chips Shop
4	Abbey Wood	51.49245	0.12127	The Crafty Cafe by Sharon	51.487449	0.112696	Café

LONDON MAP RENDERING



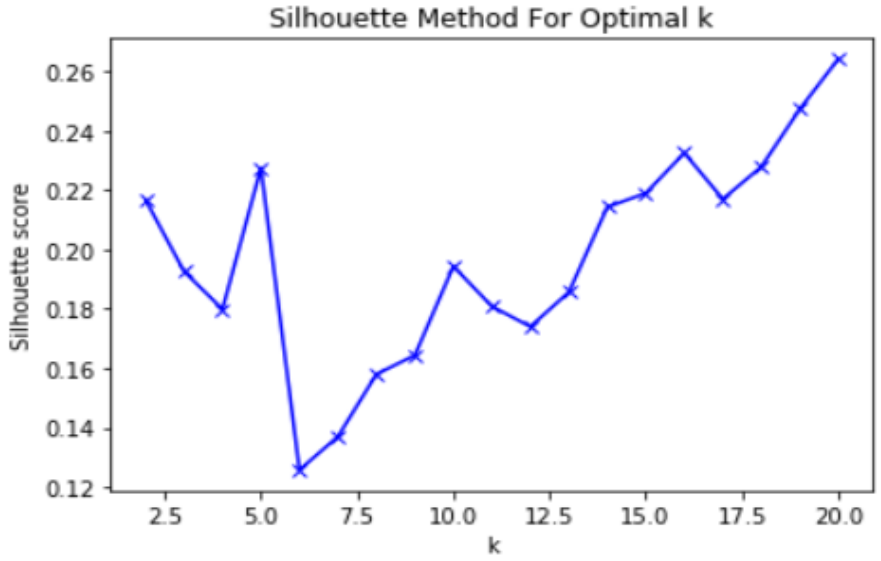
K-MEANS METHOD

Elbow Method



Elbow is not clear

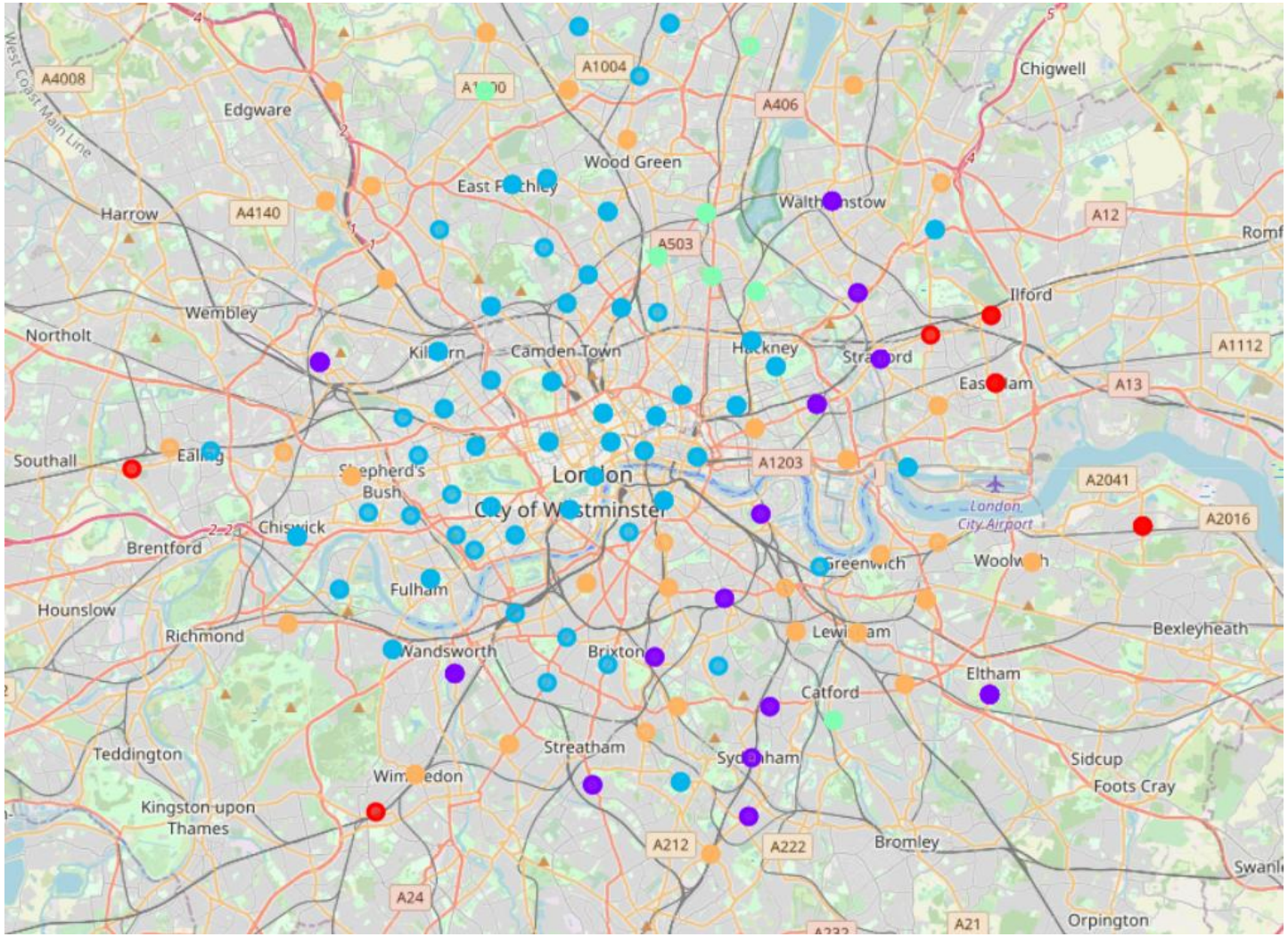
Silhouette Method



Highest value is desirable

After applying the 2 methods the final K was set at 5

LONDON MAP CLUSTERING



- *Cluster 0 - Indian/Fish & Chips*
- *Cluster 1 - Pizza*
- *Cluster 2 - Italian*
- *Cluster 3 - Turkish*
- *Cluster 4 - Indian*

CONCLUSIONS

- Built a model to cluster food type in a city;
- Identified 5 cluster;
- Room to improve the model and develop further study:
  - Cultural distribution in the city;
  - What's the best area to open a restaurant;
  - Compare another city neighbourhood (e.g. London vs New York).