

# Opening a Restaurant within Croydon

# Business Problem

- ▶ The London Borough of Croydon has an extensive shopping district and night-time economy. More businesses can be established to take advantage of this.
- ▶ Restaurants are frequently visited business places.
- ▶ Restaurant owners need to find a location that has a continuous stream of traffic, convenient parking, and is in proximity to other businesses.
- ▶ Based on the kinds of areas, the restaurant type to be established and the style of service can be determined

# Data Acquisition and Cleaning

- ▶ Location data was scrapped from Wikipedia articles
- ▶ Venue data was sourced from Foursquare API

	Location	London_borough	Post_town	Postcode_district	Dial_code	OS_grid_ref	Latitude	Longitude
0	Addington	Croydon	CROYDON	CR0	020	TQ375645	51.3583	-0.0305
1	Addiscombe	Croydon	CROYDON	CR0	020	TQ345665	51.381	-0.0663
2	Coombe	Croydon	CROYDON	CR0	020	TQ342647	NaN	NaN
3	Coulsdon	Croydon	COULSDON	CR5	020, 01737	TQ298596	51.3211	-0.1386
4	Croydon	Croydon	CROYDON	CR0	020	TQ335655	51.3727	-0.1099

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# Mapped Areas

▶ The areas were visualized  
using folium library



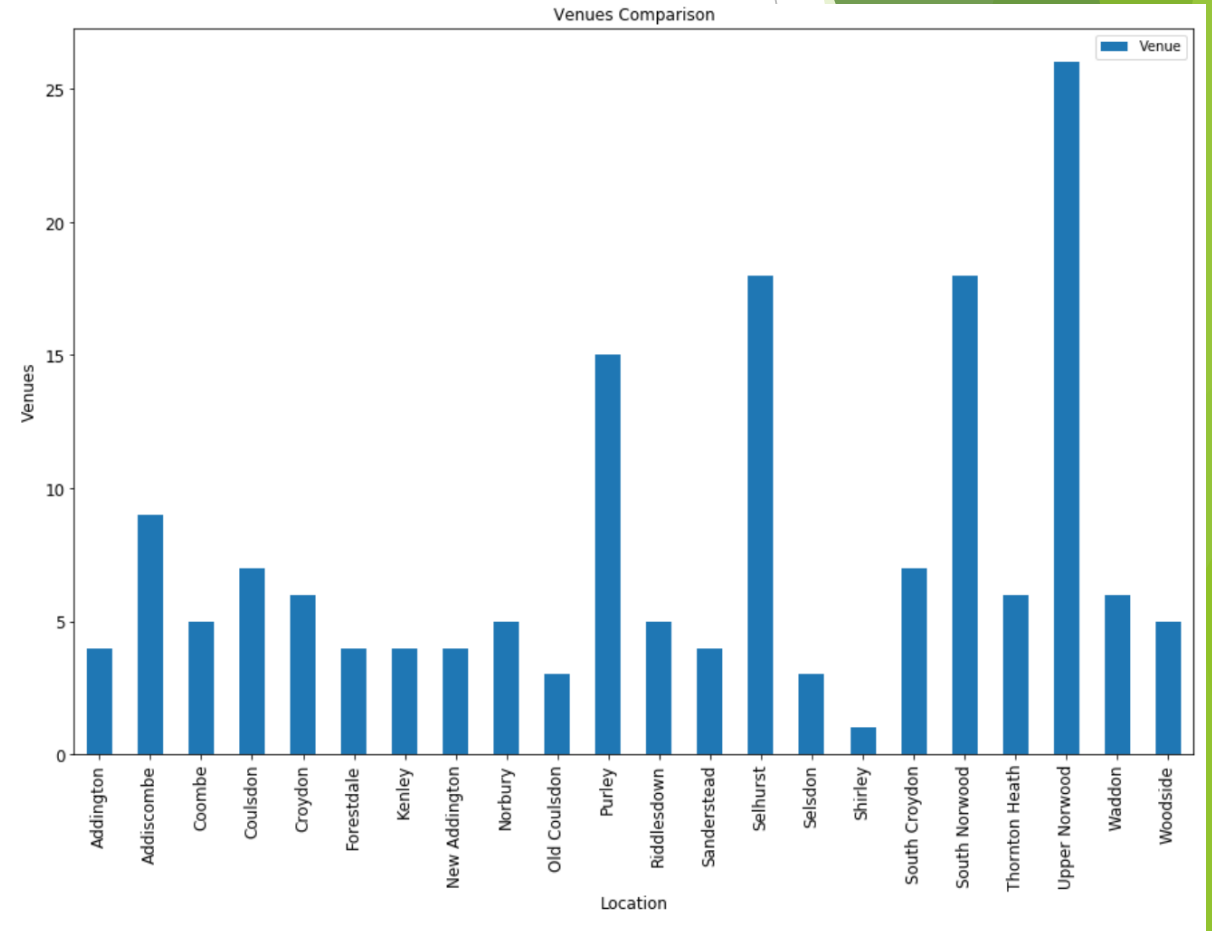
# Venue Data

- Venue data was derived from Foursquare API

:	Location	Latitude	Longitude		Venue	Venue Latitude	Venue Longitude	Venue Category
0	Addington	51.3583	-0.0305		Shell	51.357047	-0.033468	Gas Station
1	Addington	51.3583	-0.0305	The Cricketers (Harvester)		51.357833	-0.032844	English Restaurant
2	Addington	51.3583	-0.0305	Addington Village Interchange		51.356374	-0.032680	Bus Station
3	Addington	51.3583	-0.0305	Addington Village London Tramlink Stop		51.356276	-0.032923	Tram Station
4	Addiscombe	51.3810	-0.0663		Co-op Food	51.381969	-0.069717	Grocery Store

# Exploratory Data Analysis

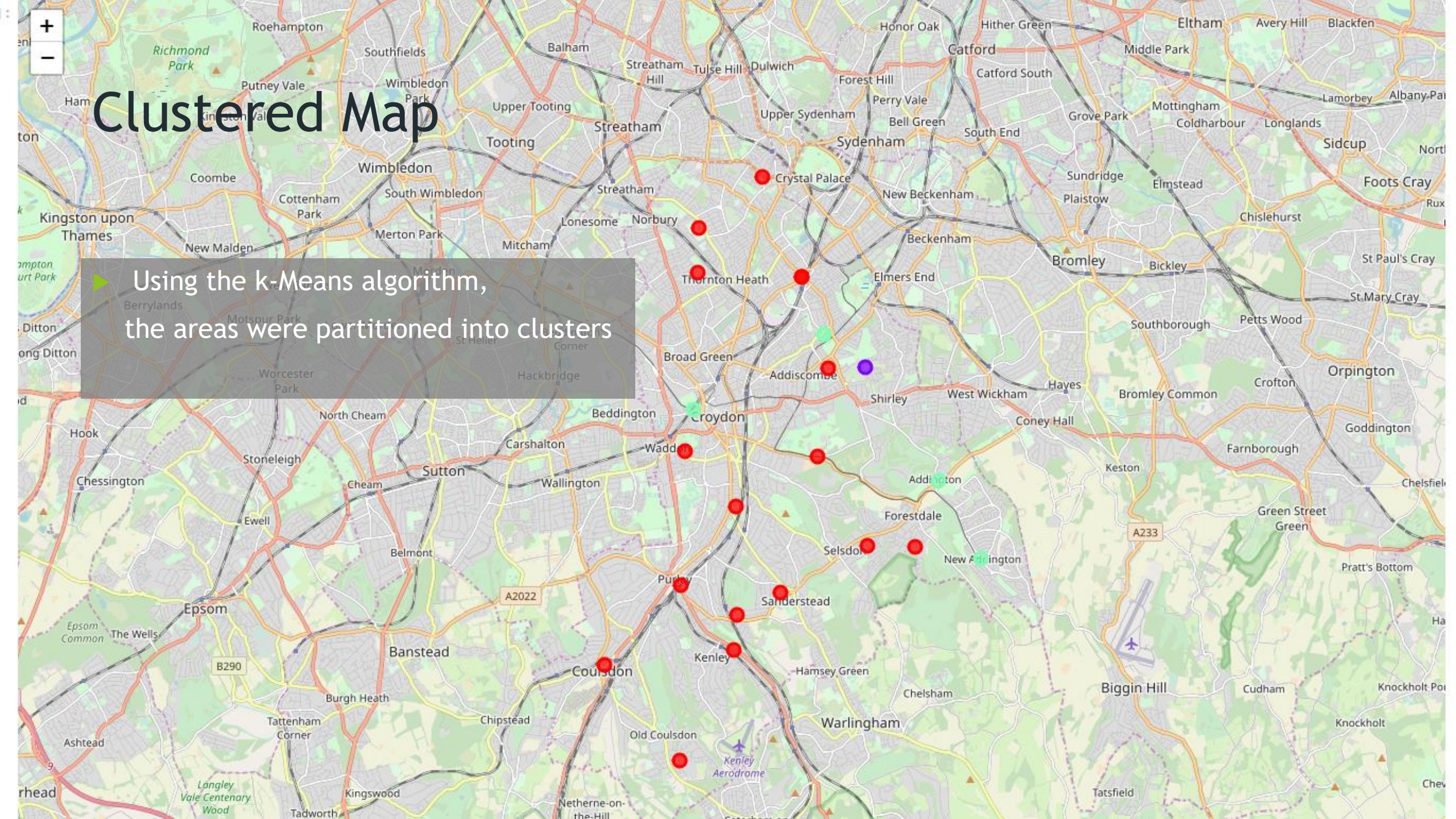
- ▶ Number of venues per areas were compared
- ▶ Upper Norwood had the most
- ▶ Shirley had the least





# Clustered Map

▶ Using the k-Means algorithm,  
the areas were partitioned into clusters





# Conclusion

Areas in the red cluster would be suitable for establishing a restaurant

- ▶ Addiscombe
- ▶ Riddlesdown
- ▶ Coombe
- ▶ Sanderstead
- ▶ Coulsdon
- ▶ Selhurst
- ▶ Forestdale
- ▶ Selsdon
- ▶ Kenley
- ▶ South Croydon
- ▶ Norbury
- ▶ South Norwood
- ▶ Old Coulsdon
- ▶ Thornton Heath
- ▶ Purley
- ▶ Upper Norwood
- ▶ Waddon

- The accuracy of the analysis can be improved by sourcing for more data
- This analysis can be performed on other locations to determine what areas would be suitable for any kind of business.