

LOCATION RECOMMENDATION



DATA FRAME

- Contains Street name, Office Rentals and Retail Rentals.

	Street	Retail	Office
0	AIRPORT BOULEVARD	326.27	NaN
1	ALBERT STREET	89.32	52.02
2	ALEXANDRA ROAD	109.37	68.89
3	ANG MO KIO AVENUE 3	268.37	NaN
4	ANSON ROAD	82.41	65.91

DATA ANALYSIS

- Replace NaN values with 0
- Find the coordinates of each location

	Street	Retail	Office	Country	address	Coordinates
0	AIRPORT BOULEVARD	326.27	0.00	Singapore	AIRPORT BOULEVARD ,Singapore	(Airport Boulevard, Changi Business Park, Sout...
1	ALBERT STREET	89.32	52.02	Singapore	ALBERT STREET ,Singapore	(Albert Street, Clarke Quay, Selegie, Singapor...
2	ALEXANDRA ROAD	109.37	68.89	Singapore	ALEXANDRA ROAD ,Singapore	(Alexandra Road, Alexandra, Sentosa Cove, Sout...
3	ANG MO KIO AVENUE 3	268.37	0.00	Singapore	ANG MO KIO AVENUE 3 ,Singapore	(Ang Mo Kio Avenue 3, Serangoon North, Singapo...
4	ANSON ROAD	82.41	65.91	Singapore	ANSON ROAD ,Singapore	(Anson Road, Chinatown, Shenton Way, Singapore...

DATA ANALYSIS

- Find latitude and longitude values using coordinates

	Street	Retail	Office	Country	address	Coordinates	Latitude	Longitude
0	AIRPORT BOULEVARD	326.27	0.00	Singapore	AIRPORT BOULEVARD ,Singapore	(Airport Boulevard, Changi Business Park, Sout...	1.347311	103.983517
1	ALBERT STREET	89.32	52.02	Singapore	ALBERT STREET ,Singapore	(Albert Street, Clarke Quay, Selegie, Singapor...	1.303881	103.851074
2	ALEXANDRA ROAD	109.37	68.89	Singapore	ALEXANDRA ROAD ,Singapore	(Alexandra Road, Alexandra, Sentosa Cove, Sout...	1.278088	103.802975
3	ANG MO KIO AVENUE 3	268.37	0.00	Singapore	ANG MO KIO AVENUE 3 ,Singapore	(Ang Mo Kio Avenue 3, Serangoon North, Singapo...	1.370656	103.873373
4	ANSON ROAD	82.41	65.91	Singapore	ANSON ROAD ,Singapore	(Anson Road, Chinatown, Shenton Way, Singapore...	1.275815	103.846491

FOLIUM MAP

PLOT MAP OF SINGAPORE AND
MARK STREET LOCATIONS



FOURSQUARE API

- Gets all venue categories

	Street	Street Latitude	Street Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	AIRPORT BOULEVARD	1.347311	103.983517	World of Sports 3-Top T3	1.347745	103.984680	Sporting Goods Shop
1	AIRPORT BOULEVARD	1.347311	103.983517	Airport Boulevard	1.345959	103.983836	Road
2	AIRPORT BOULEVARD	1.347311	103.983517	Dnata Inflight Catering (CIAS)	1.347647	103.985100	Airport Terminal
3	AIRPORT BOULEVARD	1.347311	103.983517	Hugo Boss	1.347255	103.985423	Men's Store
4	AIRPORT BOULEVARD	1.347311	103.983517	Pizza Hut T3	1.349500	103.983649	Pizza Place

CATEGORICAL FEATURES

- Categorical Features using One Hot Encoding

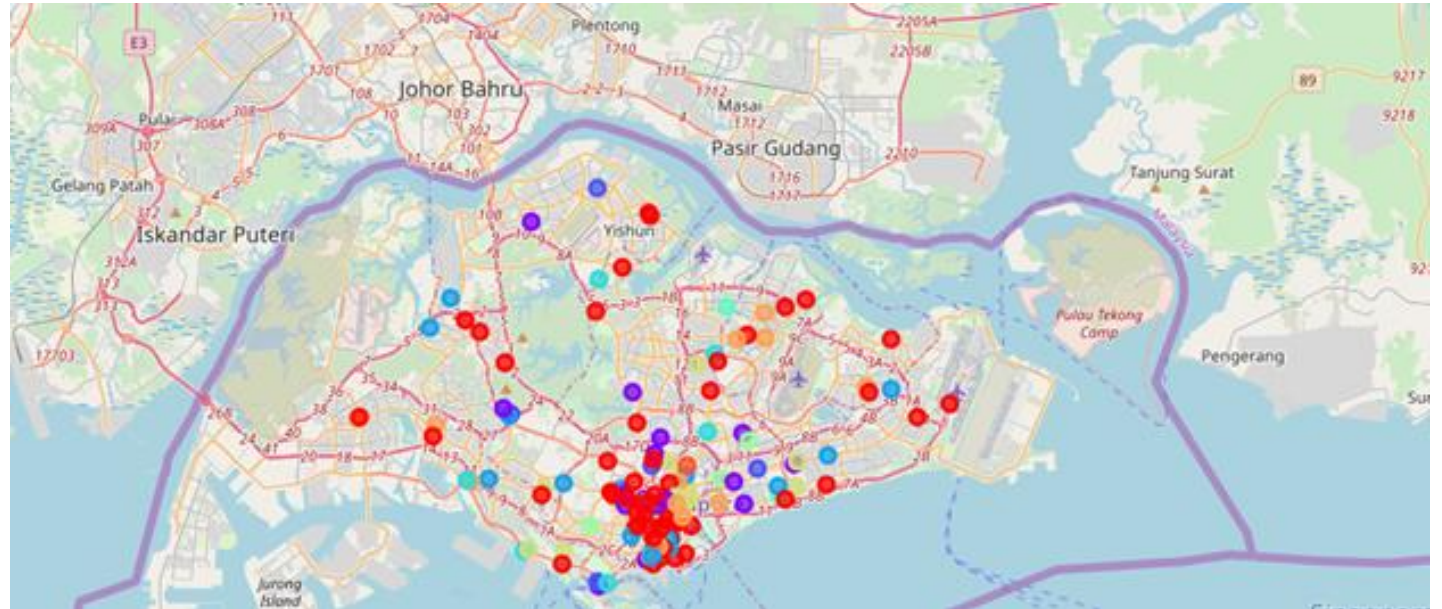
	Street	Street Latitude	Street Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
42	ALBERT STREET	1.303881	103.851074	Albert Centre Market & Food Centre	1.301024	103.854477	Food Court
80	ALEXANDRA ROAD	1.278088	103.802975	Bus Stop 18019	1.281130	103.802311	Bus Station
82	ALEXANDRA ROAD	1.278088	103.802975	Bus Stop 14369 (Gilman Hts Condo	1.281373	103.803256	Bus Station
94	ANG MO KIO AVENUE 3	1.370656	103.873373	Ghee Hong Eating House	1.369535	103.871813	Food Court
96	ANG MO KIO AVENUE 3	1.370656	103.873373	Cafe 107	1.369715	103.869961	Food Court

DATA PROCESSING

- Using K-Means Clustering

	Street	Retail	Office	Country	address	Coordinates	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue
0	AIRPORT BOULEVARD	326.27	0.00	Singapore	AIRPORT BOULEVARD ,Singapore	(Airport Boulevard, Changi Business Park, Sout...	1.347311	103.983517	0.0	NaN	NaN	NaN
1	ALBERT STREET	89.32	52.02	Singapore	ALBERT STREET ,Singapore	(Albert Street, Clarke Quay, Selegie, Singapor...	1.303881	103.851074	5.0	Food Court	Train Station	Bus Station
2	ALEXANDRA ROAD	109.37	68.89	Singapore	ALEXANDRA ROAD ,Singapore	(Alexandra Road, Alexandra, Sentosa Cove, Souf...	1.278088	103.802975	7.0	Bus Station	Train Station	Food Court
3	ANG MO KIO AVENUE 3	268.37	0.00	Singapore	ANG MO KIO AVENUE 3 ,Singapore	(Ang Mo Kio Avenue 3, Serangoon North, Singapo...	1.370656	103.873373	4.0	Food Court	Bus Station	Train Station
4	ANSON ROAD	82.41	65.91	Singapore	ANSON ROAD ,Singapore	(Anson Road, Chinatown, Shenton Way, Singapore...	1.275815	103.846491	2.0	Food Court	Train Station	Bus Station

K-MEANS CLUSTERING



USE CASE

- Locations having Retail Rental < \$100 (psm) per month

