Applied Data Science Capstone Project

The Battle of the Neighborhoods

Where to setup a new Restaurant in Singapore?

Top 5 underserved areas

(by Restaurant per Population)

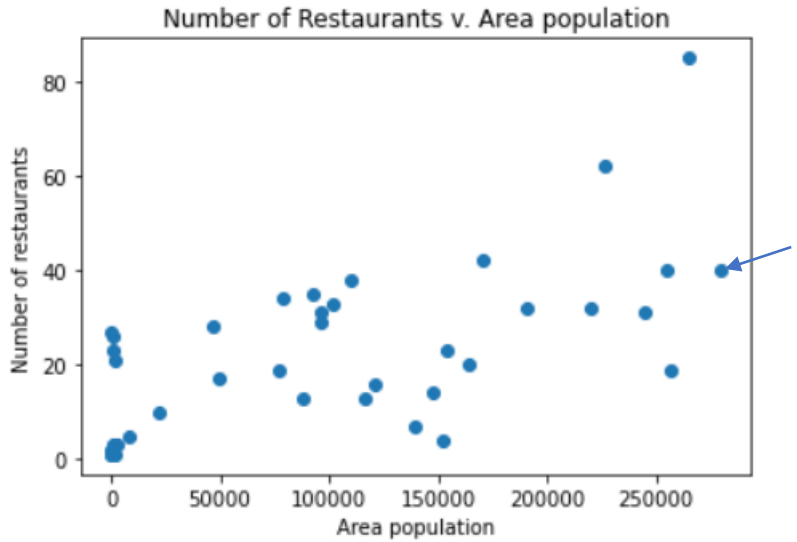
1. Bukit Merah
2. Bukit Panjang
3. Tampines
4. Pasir Ris
5. Serangoon

Area	Population	Population per km2	Restaurants	Restaurants per Person
BUKIT MERAH	151980	11000.00	4	0.000026
BUKIT PANJANG	139280	15000.00	7	0.000050
TAMPINES	256730	12400.00	19	0.000074
PASIR RIS	148020	9600.00	14	0.000095
SERANGOON	116310	11500.00	13	0.000112
ANG MO KIO	163950	13400.00	20	0.000122
SENGKANG	244600	23000.00	31	0.000127
TOA PAYOH	120650	14300.00	16	0.000133
BEDOK	279380	13000.00	40	0.000143
YISHUN	220320	10100.00	32	0.000145
BISHAN	88010	12000.00	13	0.000148
BUKIT BATOK	153740	14000.00	23	0.000150
WOODLANDS	254730	18700.00	40	0.000157
CHOA CHU KANG	190890	30000.00	32	0.000168
BUKIT TIMAH	77430	4400.00	19	0.000245
PUNGGOL	170560	17800.00	42	0.000246
HOUGANG	226240	16000.00	62	0.000274
QUEENSTOWN	96340	4400.00	29	0.000301
JURONG WEST	264860	18000.00	85	0.000321
SEMBAWANG	95920	8400.00	31	0.000323

Where to setup a new Restaurant in Singapore?

There are areas of high population with relatively low number of restaurants.

Tampines (mentioned in previous slide) has a very large population but relatively few restaurants.



Population is correlated to number of restaurants

Pearson's coefficient is highly positive (0.65) between population and number of restaurants, with statistically significant p-values.

	Pearson's coefficient	**P-value**
Population and number of Restaurants	0.65	< 0.01
Population density and number of restaurants	0.56	< 0.01

Population is a predictor of number of restaurants

With statistically significant p-values, regressions indicate that population is a predictor of number of restaurants.

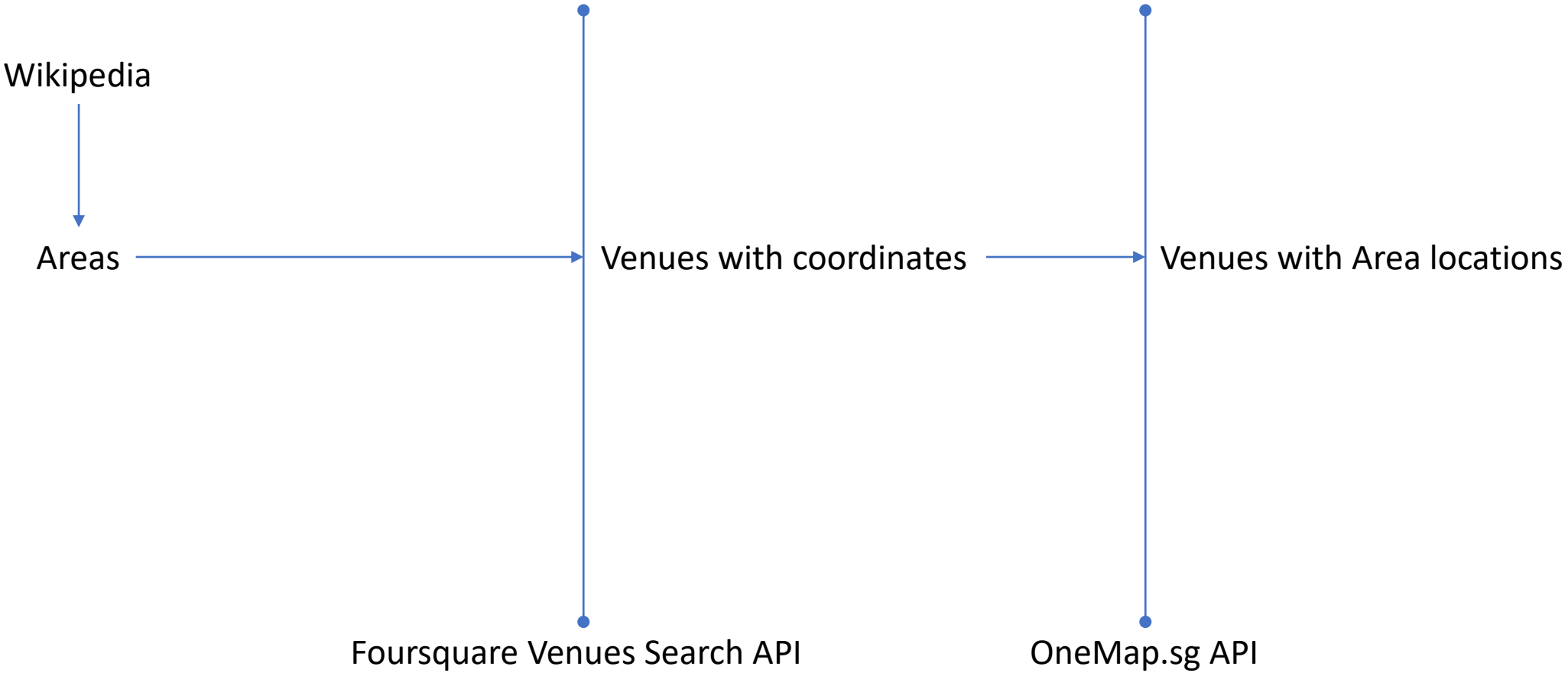
$$Number\ of\ restaurants = 9.53 + 0.0001 * Population$$

P-value: < 0.01

$$Number\ of\ restaurants = 10.7 + 0.0013 * Population\ per\ km^2$$

P-value: < 0.01

APIs used


Wikipedia
Areas
Venues with coordinates
Venues with Area locations
Foursquare Venues Search API
OneMap.sg API