NEW OFFICE OPENING

NEW ABC OFFICE

Background

◦ Company ABC is looking to open it's first US office, in a major metropoliatain area.

◦ The company needs a highly skilled and happy workforce.

◦ The company's workforce love pizza places, gyms, coffee shops and wine bars. This frequency of these locations will be the proxy for a happy workforce.

◦ We will leverage the foursquare API to rank these items by city.

DATA

Data

- We wil leverage the foursquare API for the top 20 cities by per capita income.

- In order to do this we will pull the city lat long from from geopy.geocoders Nominatim module, to convert an address into latitude and longitude values (see section 3 data)

- We will pull back data on the number of art galleries, gyms, coffee shops and wine bars by city.
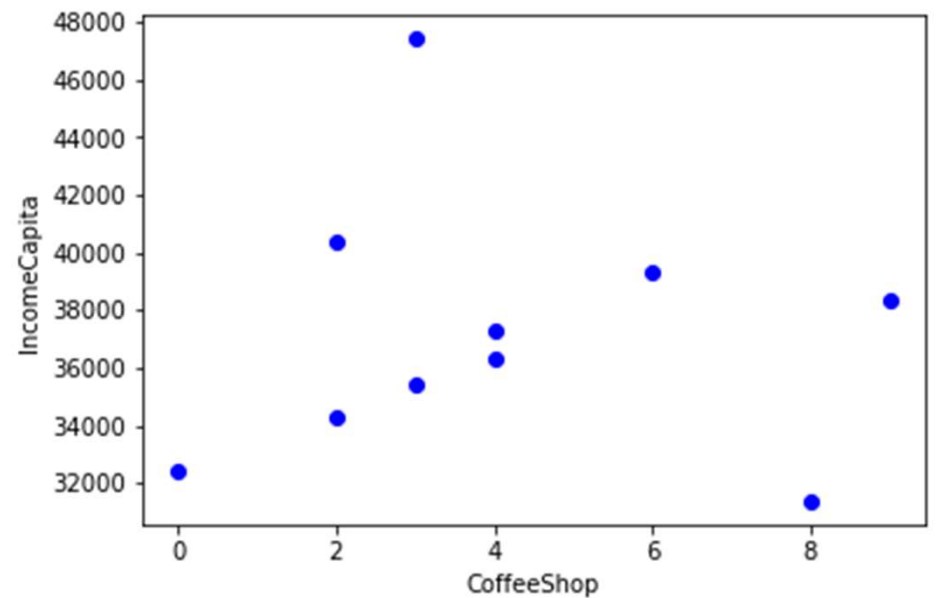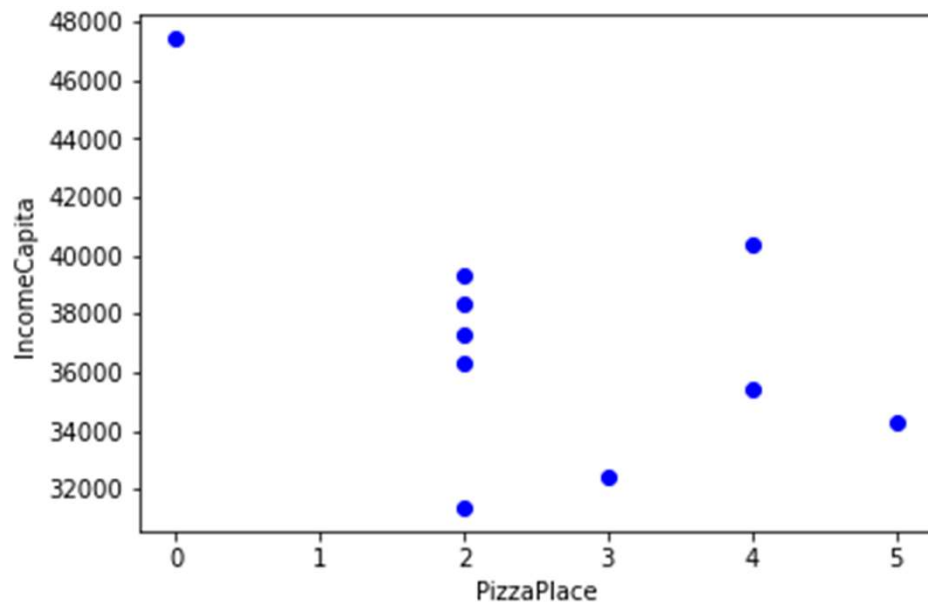
METHODOLOGY

Potential cities

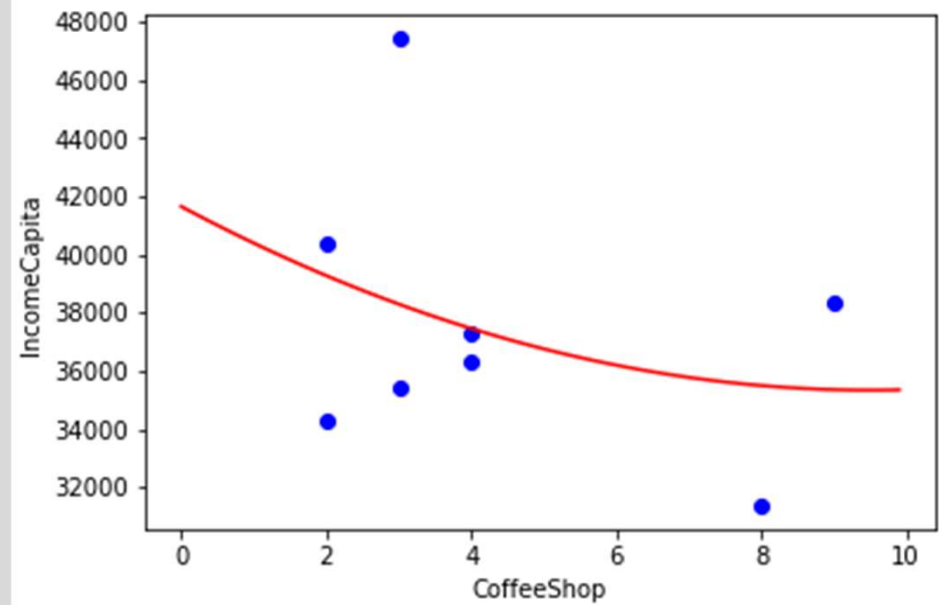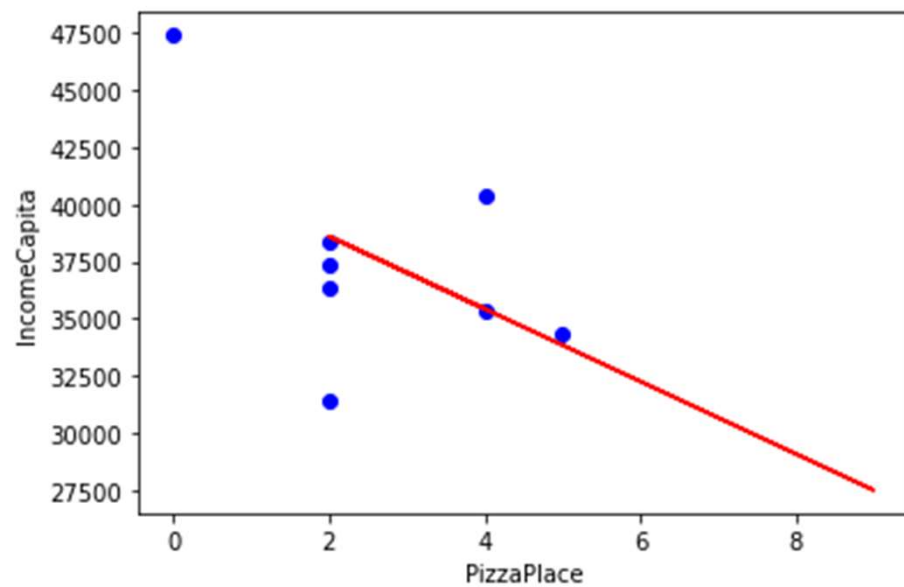|	City	IncomeCapita	Lat	Long
0	Washington, DC	47411	38.894992	-77.036558
1	San Jose, CA	40392	37.336191	-121.890583
2	Seattle, WA	39322	47.603832	-122.330062
3	San Francisco, CA	38355	37.779026	-122.419906
4	Boston, MA	37311	42.360253	-71.058291
5	Honolulu, HI	36339	21.304547	-157.855676
6	Minneapolis, Minnesota	35388	44.977300	-93.265469
7	Hartford, CT	34310	41.765558	-72.690613
8	Denver, CO	32399	5.342848	-72.395985
9	Portland, OR	31377	45.520247	-122.674195

Data gathered and collated

	City	Adult Boutique	American Restaurant	Antique Shop	Aquarium	Argentinian Restaurant	Art Gallery	Art Museum	Arts & Crafts Store	Asian Restaurant	...
0	Boston, MA	0	3	0	1	0	0	0	0	1	...
1	Denver, CO	0	0	0	0	0	0	0	0	0	...
2	Hartford, CT	0	8	0	0	0	1	1	2	0	...
3	Honolulu, HI	0	1	0	0	0	0	1	0	0	...
4	Minneapolis, Minnesota	0	2	1	0	0	2	1	0	2	...
5	Portland, OR	0	1	0	0	1	0	1	0	0	...
6	San Francisco, CA	1	0	0	0	0	0	3	1	0	...
7	San Jose, CA	0	0	0	0	0	1	0	0	1	...
8	Seattle, WA	0	0	0	0	0	0	2	0	0	...
9	Washington, DC	0	4	0	0	0	0	5	0	1	...

Correlation?

Regression model

FINDINGS

Results

◦ Both models are quite terrible predictors of per capita income.

◦ The model predicts income decreases as pizza places increase. Pizza places only explain 9% of the variance in capita income.

◦ The model has fitted to coffee shops but the R Squared is negative, meaning there is no correllation.

◦ There are not enough data points on gyms and wine bars to perform the analysis.

Results (2)

◦ We have fitted one model with some skill, which predicts lower number of pizza places gives higer capita income.

◦ Of course correlation does not imply causation!

◦ The analysis is very limited by the 100 limit on the foursquare API, which does not give enough results for each venue type to build a good model.

◦ Recommend ABC company to pay for the developer level API so that they can get better results :)

CONCLUSION:

Open office in Washington, DC!