Philadelphia - the city of brotherly love

1. **Description of the problem:**
   A. My client is already a proud owner of two coffee shops, two eateries, a bakery, and a large family restaurant. He is looking to expand his business, particularly in the field of boutique coffee shops. However, he's not exactly sure where the new coffee shop should be located. He has already had great success with a coffee shop located near a university, and would like to expand a bit beyond university clientele. He wants to make sure that his coffee shop is not overcrowded by other chain coffeeshops, i.e. Starbucks, or eateries that would take away his revenue, but this is not a. He is based in Pennsylvania and would like to continue to build his business in that area. He is very interested in the Philadelphia market and would like to know more details about where a new coffeeshop would bring in additional revenue for his business, while also expanding beyond university-centralized locations.
   B. This is a preliminary search. There are a few spots in the city that my client has already chosen as possible places to set up a new coffee shop, but he wants to see data that will help guide his decision. This would be initial research, and if the data yields a neighborhood that he is unsure of (extraneous factors like shop rent prices, crime, etc.) further analysis will have to be conducted.
   C. I plan to do a few things.
      a. Explore Philadelphia neighborhoods using metrics including but not limited to…
         a. population size
         b. population density
         c. average income
      b. Identify the most common venues in each neighborhood to help make a location decision that could have an impact and immediate influence on the business.

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In [108]: phd.set_index('Zipcode').head()
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Out[108]:

Zipcode	Location	City	Population	Density	Avg Income
19102	39.953423, -75.165384	Philadelphia, Pennsylvania	4,396	22,186.08	$51,949.00
19103	39.952795, -75.173949	Philadelphia, Pennsylvania	19,714	29,353.79	$37,959.00
19104	39.960323, -75.197883	Philadelphia, Pennsylvania	50,125	16,806.34	$46,520.00
19106	39.950472, -75.147231	Philadelphia, Pennsylvania	8,359	12,566.59	$44,776.00
19107	39.951623, -75.158637	Philadelphia, Pennsylvania	12,340	22,723.74	$60,179.00

2. Description of the data:

A. *Postal Codes* - I was able to download a file from https://www.geonames.org/postal-codes/US/PA/101/philadelphia.html that listed all the postal codes in Philadelphia City. I was also able to web scrape some population data for each postal code from http://zipatlas.com/us/pa/philadelphia/zip-code-comparison/population-density.htm. I've already put some of the data together, but will try to include an average salary for each zip code.

B. *Income Data* - http://zipatlas.com/us/pa/philadelphia/zip-code-comparison/population-density.htm. This is the income data that I used to merge with the population density data.

C. *Foursquare API* - I will use the Foursquare API to get the most common venues in Philadelphia, and connect them to the postal code data.

D. *Starbucks Data* - I was able to download a CSV file for the Starbucks store locations from www.kaggle.com. I'll use this information to display on a map of possible competitive stores to cross reference my own data.