



# PITTSBURGH RESTAURANT RELOCATOR

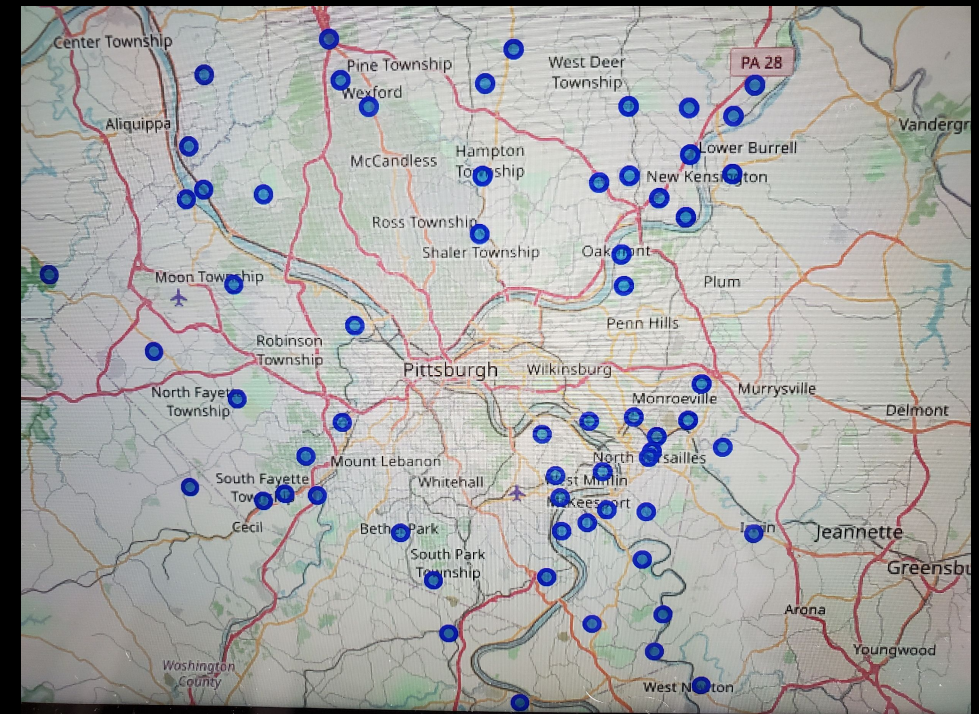
Coursera Applied Data Science Capstone – The Battle of the  
Neighborhoods

# INTRODUCTION

- Goal:
  - Identify a list of the best suburbs for a downtown Pittsburgh Chinese restaurant to move to given the lower demand for downtown restaurants due to COVID-19
- Data:
  - Three data sources were used for this project:
    - Zipdatamaps.com – for list of ZIP codes and their populations in Allegheny county
    - Public.opendatasoft.com – for a mapping of ZIP codes to their latitude and longitude
    - Foursquare API data – for determining the top venues near a given ZIP code

# DATA

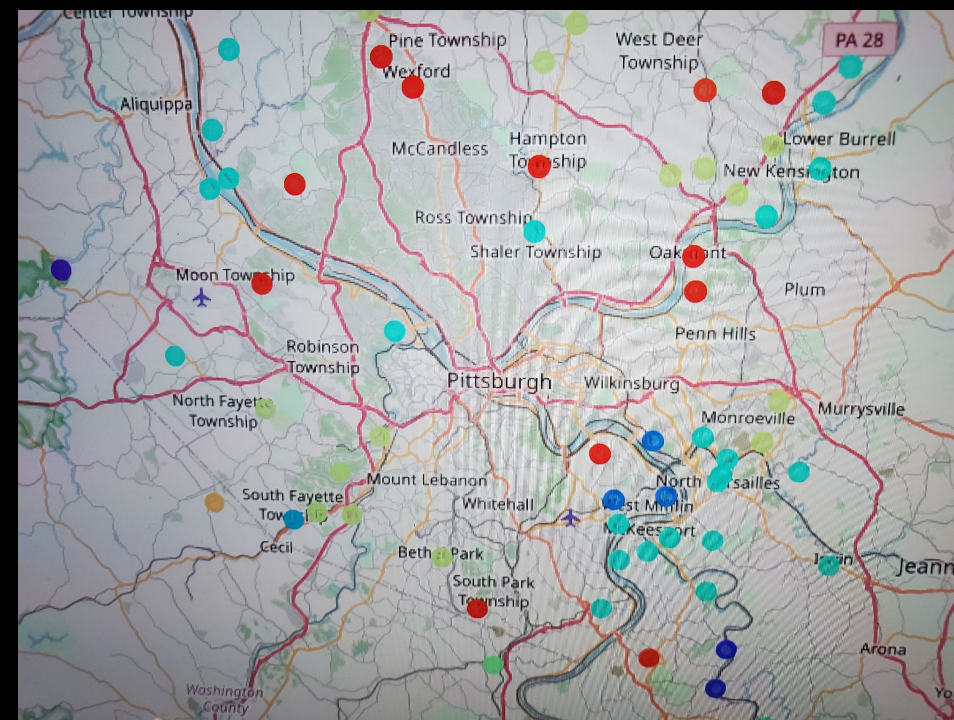
- Methodology
  - The ZIP Code data was imported, formatted, and cleaned for analysis. To visualize the pre-clustered data, the following map was outputted
  - This only shows the suburbs as all ZIP Codes with “Pittsburgh” in the location name were removed. The map confirms no locations remain in the general Pittsburgh city limits





# DATA

- Methodology (continued)
  - Foursquare API data was pulled for the remaining suburbs
  - This data was used to determine the top ten venues in each area
  - The DataFrame was broken into 12 clusters using K-Means
    - Fewer clusters resulted in a lack of truly distinct neighborhood clusters
    - More clusters resulted in smaller, less useful clusters
  - The map to the right shows the clustered data



# DATA

- Analysis
  - Two clusters were relatively similar, but Cluster 9 had the higher overall restaurant quantity with the lowest number of existing Chinese restaurants
  - Cluster 9 was filtered to remove any locations that had “Chinese Restaurant” in the top 10 venues to avoid oversaturated competition
  - Cluster 9 was merged into a DataFrame with population data so the final list could be sorted by neighborhood population (for the highest number of potential customers)

Neighborhood	Population
Bethel Park	29529
Gibsonia	27049
Bridgeville	16213
Oakdale	9956
Cheswick	9029
Pitcairn	3294
Presto	1163
Creighton	1128
Harwick	895
Indianola	461
Morgan	382
Bakerstown	323
Warrendale	300

## RESULTS

- The resultant list is of 13 target suburbs ranked by population for a Chinese restaurant owner to explore for relocation or to set up a food truck
- This is a reduction of 79% from the refined list of 61 suburbs, which provides a focused list for the restaurant owner to chose from