PEARLAND, TX DISCOVERY TO OPEN THE NEW VIETNAMESE RESTAURANT

Capstone for Data Sciencetist

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Outline

- Introduction
- Data Section
- Methodology
- Result and Discussion Sections
- Conclusion

Introduction

- Provide more information about the current Vietnamese restaurants in Pearland

- Analyze Median Household Income and Diversity in Pearland in 2017

- Purpose: To open the new Vietnamese restaurant in Pearland, TX

Data Section

- Data Requirements:
    - Number of Vietnamese restaurants currently in Pearland, TX
    - The points or rates, tips, location nearby the Pearland Shopping Center
    - The median household income in 2017
    - The diversity rate of non-English spoken language in 2017

Data Section

- Data Sources:
  - Number of Vietnamese restaurants: https://developer.foursquare.com/
  - The other information of Vietnamese restaurants are provided by uses in Foursquare who used to try there: https://developer.foursquare.com/
  - The median household income: https://datausa.io/profile/geo/pearland-tx/#economy
  - The diversity: https://datausa.io/profile/geo/pearland-tx/#demographics

Methodology

- The Foursquare API is to explore all Vietnamese restaurants in Pearland, TX. It can give more information about the rating, tip, and command

- K-mean clustering algorithm is used to form the clusters of same Vietnamese restaurants in Pearland, TX. These clusters are analyzed deeper to derive the conclusion
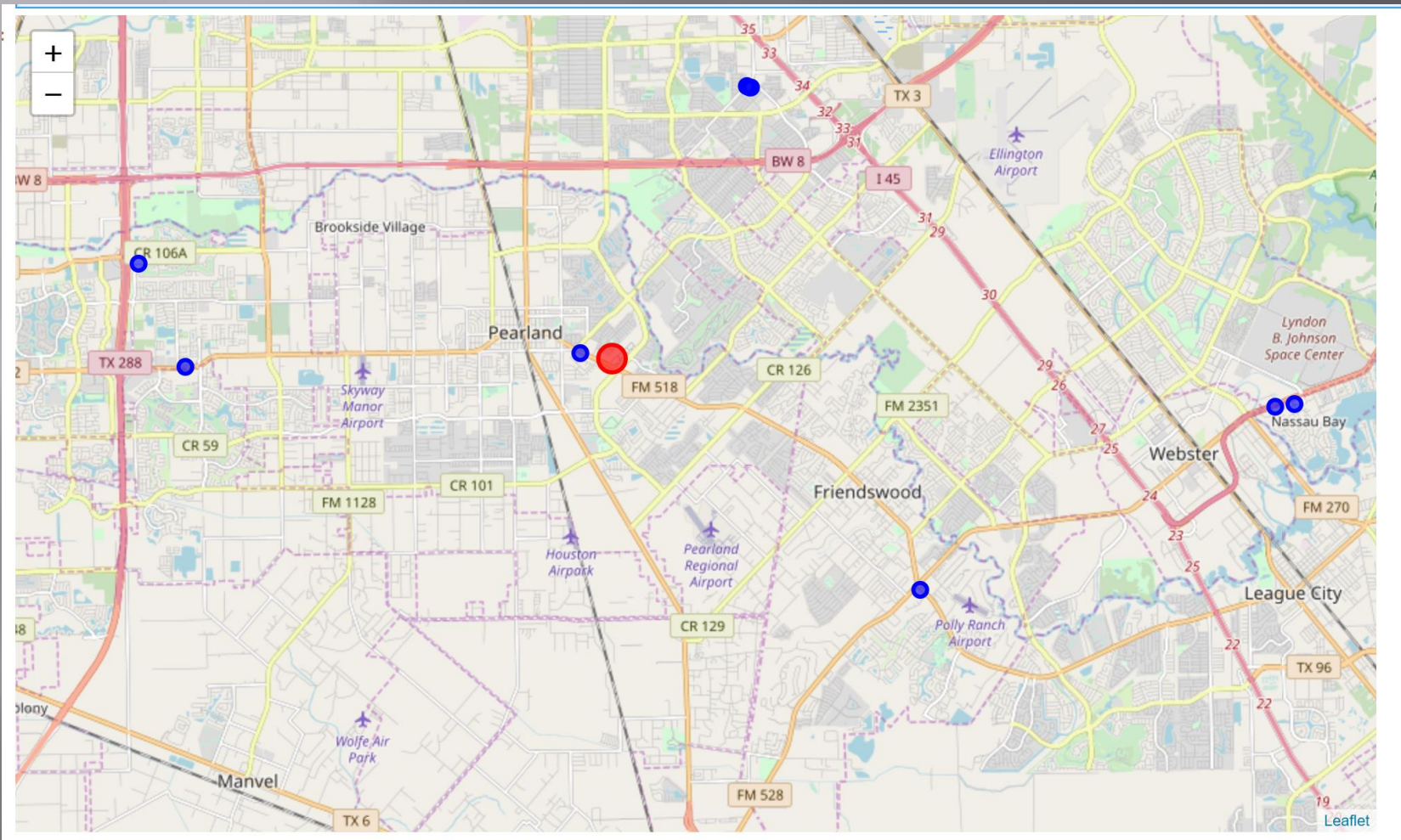
Methodology

- The Folium library is used to point out the locations on the map clearly and can view all the current restaurant in Pearland, TX

- The Matplotlib library is used to draw the bar charts and pie chart with all information to help easier analyze

Discussion and Result Sections

- Only 7 restaurants round 16,000km from Pearland Shopping Center have Vietnamese food

- After analyzed, there is only one restaurant, has enough information about the rating (7.2/10) , no tip, and closest

- This can be the good point to open the new Vietnamese restaurant because there are not many competitors for them

Vietnamese Restaurant Location Map in Pearland, TX
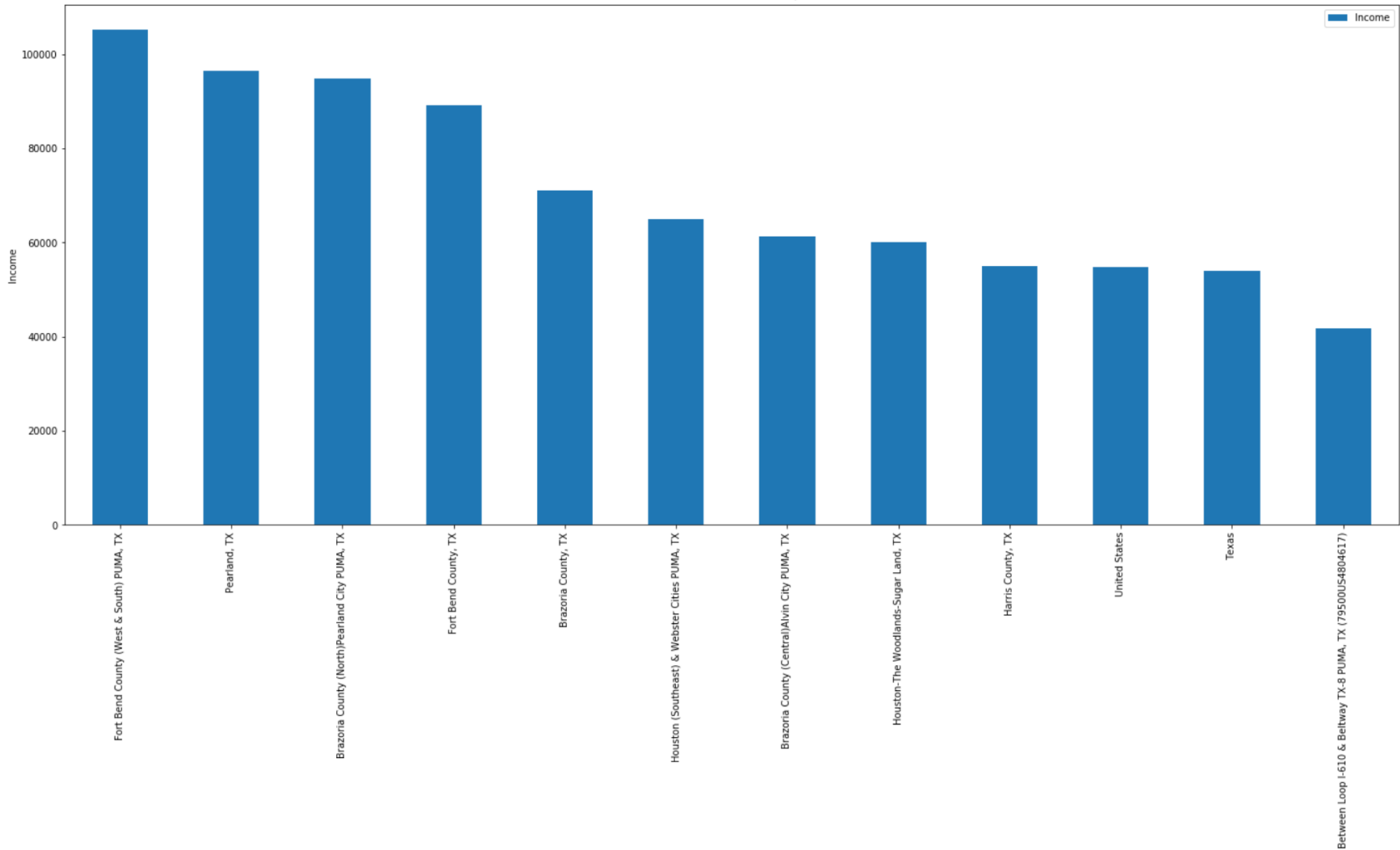
Discussion and Result Sections

- The largest shares of households have an income in the $75k - $100k range. And Pearland, TX income is the highest income in Houston's neighborhood.

- Therefore, opening the new restaurant in here also the good idea because they will have the generous customers who are too busy to cook at home but have generous income to support eat outside.

The Income in Houston Neighborhood

Geography	Income
Fort Bend County (West & South) PUMA, TX	105259.4
Pearland, TX	96409.8
Brazoria County (North)Pearland City PUMA, TX	94822.0
Fort Bend County, TX	89130.6
Brazoria County, TX	70975.2
Houston (Southeast) & Webster Cities PUMA, TX	65014.0
Brazoria County (Central)Alvin City PUMA, TX	61298.4
Houston-The Woodlands-Sugar Land, TX	59974.8
Harris County, TX	54958.2
United States	54678.2
Texas	53892.2
Between Loop I-610 & Beltway TX-8 PUMA, TX (79500US4804617)	41794.2

Chart of Income in Houston Neighborhood
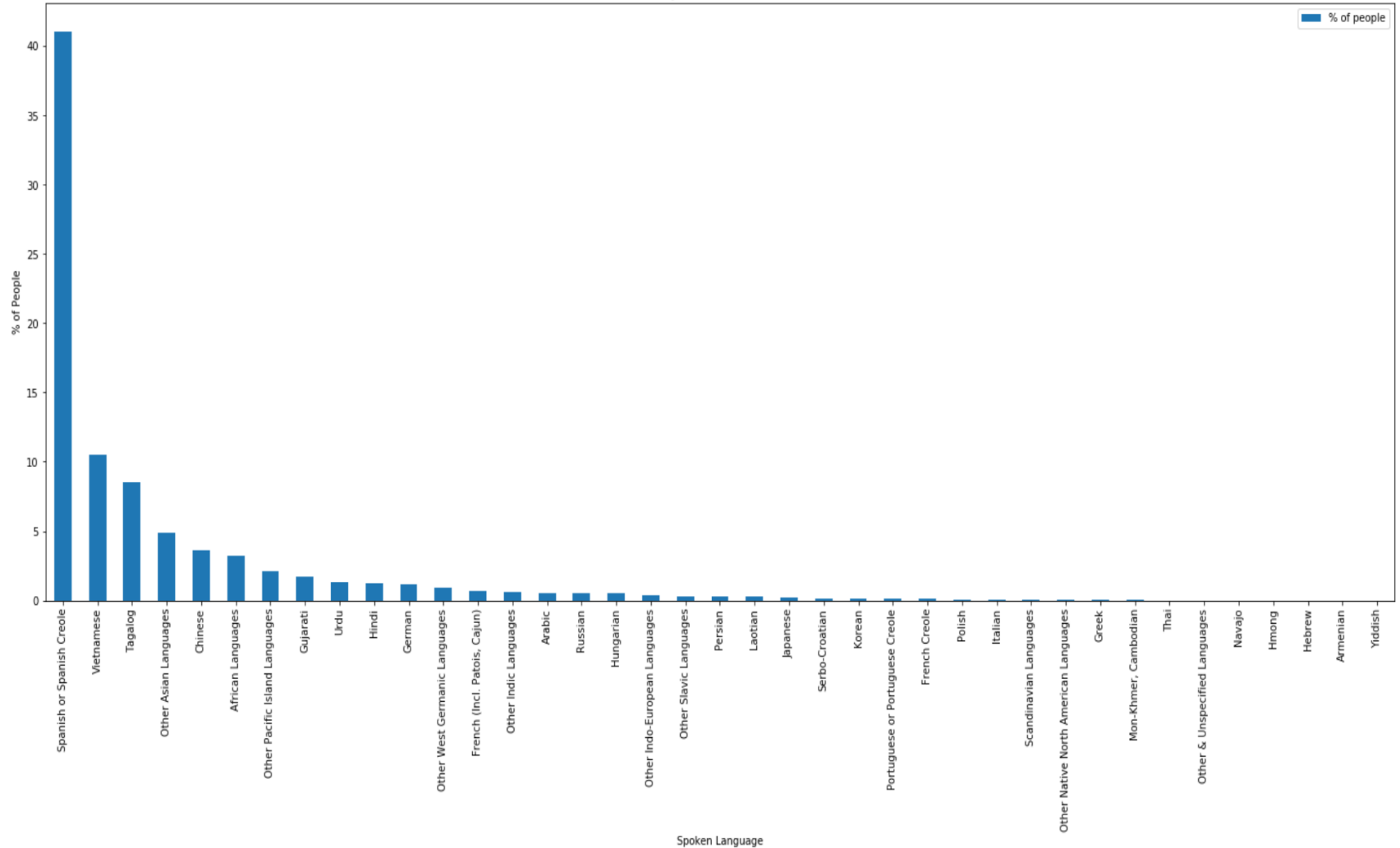

Income of Household in Pearland,TX in 2017

Discussion and Result Sections

- In 2017, the most common non-English language spoken in Pearland, TX was Spanish or Spanish Creole. 13.9% of the overall population of Pearland, TX is native Spanish or Spanish Creole speakers. 4.17% speak Vietnamese and 2.66% speak Spanish or Spanish Creole, the next two common languages.

- Therefore, with the second highest population non-English language spoken, Vietnamese, Vietnamese restaurant will have the regular clients who miss the Vietnamese food and their food culture in Pearland, TX.
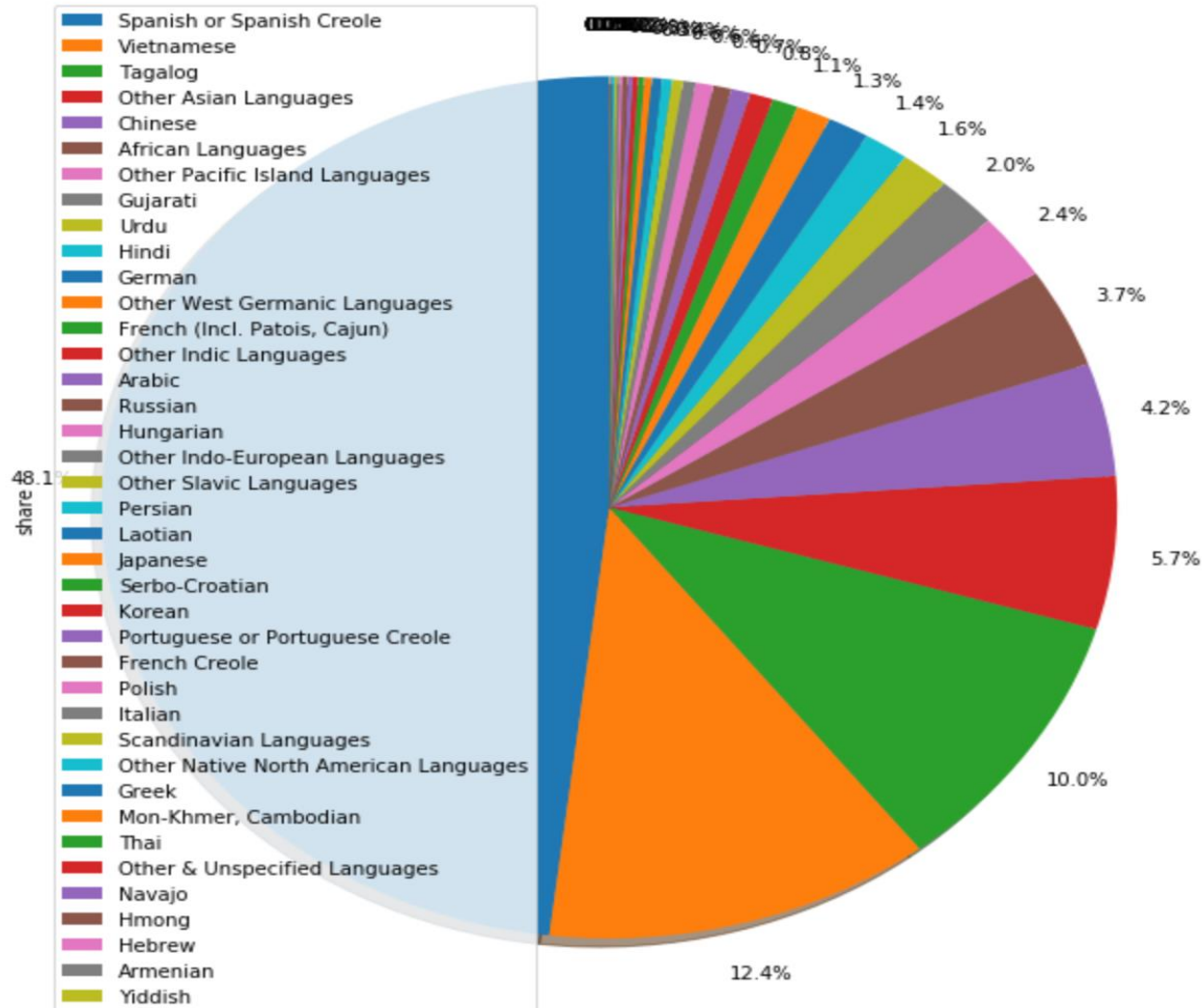
Bar Chart of Diversity in 2017

Diversity in Pearland,TX in 2017

Pie Chart of Diversity in 2017

Conclusion

- Based on the information that we analyze, open the new Vietnamese restaurant in Pearland, TX is the good idea because there are 3 reasons. First, there are not many competitors with us. Second, the residents in Pearland have good income and they easily eat outside without considering about the price. Last, there are many Vietnamese people living in Pearland, TX and love Vietnamese food.