Predicting the amount of Mexican restaurants based on Hispanic population

using 2010 census data

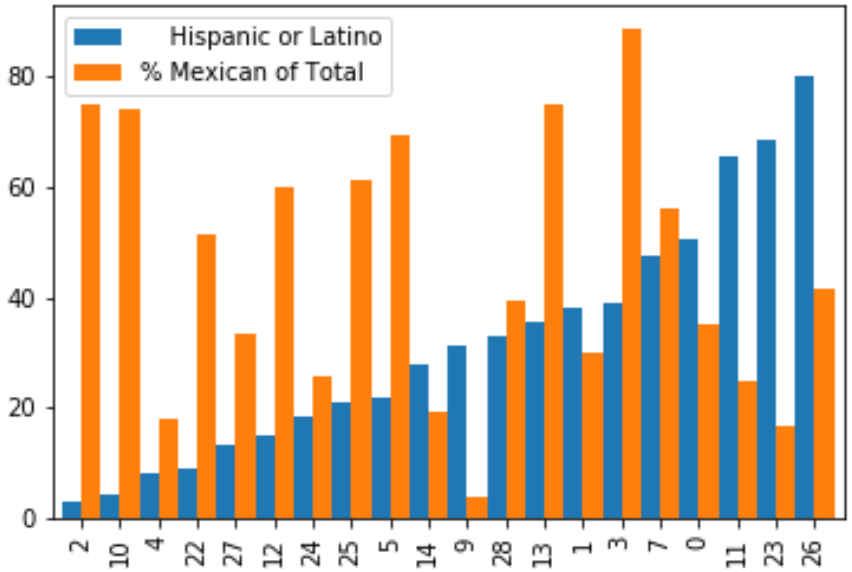
Restaurants need to know where to build new locations

- Restaurants have a hard time choosing where to build new locations
- This project analyzes how the Hispanic population in a city affects the diversity of restaurants
- Or, how the Hispanic ethnicity of the population of a city dictates the amount of ‘mexican’ restaurants
- This research would be of great interest to restaurants of any type as a factor in determining new locations

Data

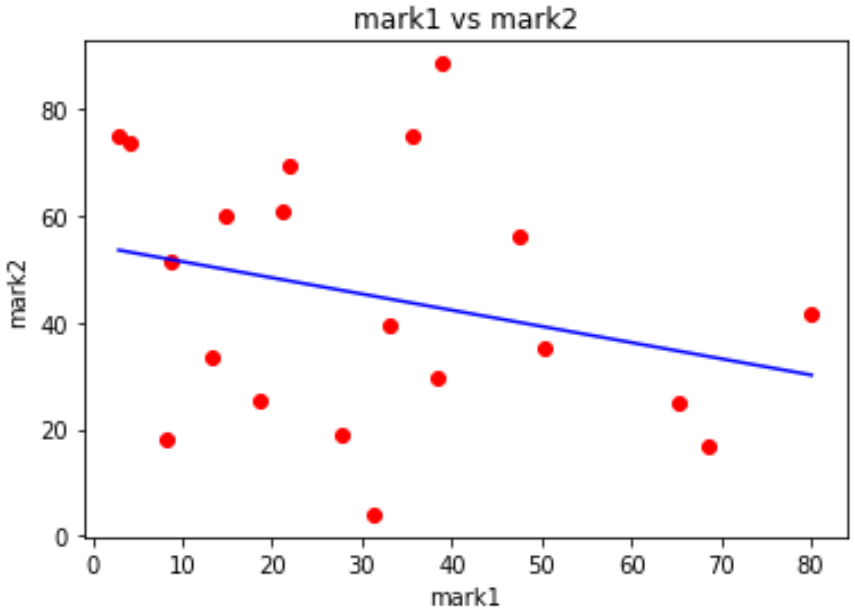
- Place and population 2010 census data retrieved from https://population.az.gov/census-data
- Place, percent of Hispanic or Latino people, and percent of other ethnicities, taken in 2010 census, retrieved from https://wpcarey.asu.edu/sites/default/files/census2010az11-11.pdf
- Cities in Phoenix metropolitan area are scraped from https://en.wikipedia.org/wiki/Phoenix_metropolitan_area and used to filter 2010 census data
- Data was saved as Exel spreadsheets, converted to csv files, and uploaded to Github for inclusion in the project

Sorted by the percent of Hispanic people in the population of each city



- This graphs shows an inverse relationship – as the Hispanic population increases, the amount of Mexican restaurants decreases

Inverse relationship



- The horizonal axis is the percent of Hispanic of population per city or town
- The vertical axis is the percent of Mexican restaurants
- The line was plotted from the predictions of a linear regression model
- The linear regression model achieves an accuracy of approximately 78%

Conclusion

- Determined a relationship between independent variables
- The prediction model needs improvement, possibly from further separation of cities into smaller areas
- Could include more factors (such as overall population or age)