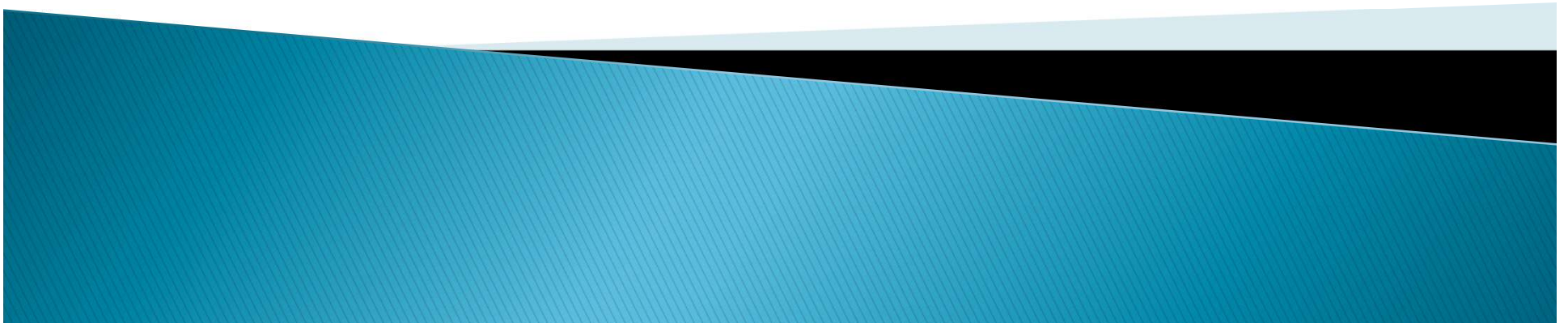


Stamford, Connecticut Neighborhood Analysis

A Look at What Neighborhoods in
Stamford Have to Offer Prospective
Residents and Businesses

Created by
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Introduction

- ▶ **Stamford, Connecticut**
 - Small city 45 minutes from New York City
 - Has numerous potential neighborhoods to move
- ▶ **Problem**
 - How can somebody pick a neighborhood that will provide the amenities that he/she desires
- ▶ **Audience**
 - People relocating to Stamford
 - Real estate agents
 - Businesses moving to Stamford
 - Businesses opening a store in Stamford



Data

▶ FourSquare

- Provides API to query to get data
- Returns points of interest (POIs)
- Bins each POI into relevant category

▶ Categories

- Can be used to define what a neighborhood provides
- Food, Nightlife, Shop & Service, Outdoors & Recreation, Travel & Transport, College & University, Other Places



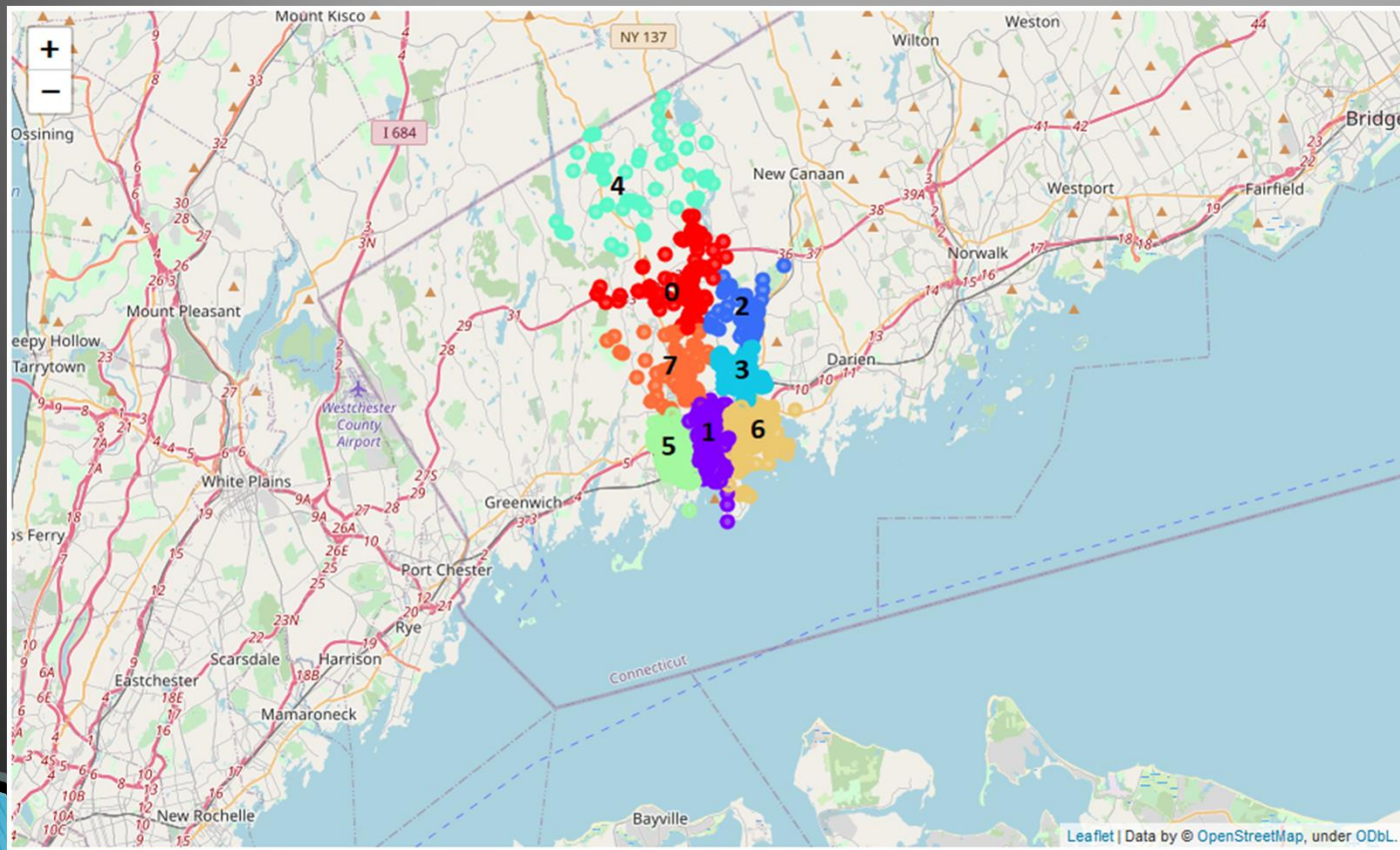
Methodology

- ▶ Explored Data
 - Pulled data from FourSquare using API
 - Found that POIs need to be queried and filtered carefully
- ▶ Collected Data
 - Iterated over grid pattern over entire city
 - Selectively queried and removed categories
- ▶ Analyzed Data
 - Ran k-Mean Clustering algorithm to find neighborhoods based on location
 - Used SSE and Silhouette Coefficients to determine optimal k



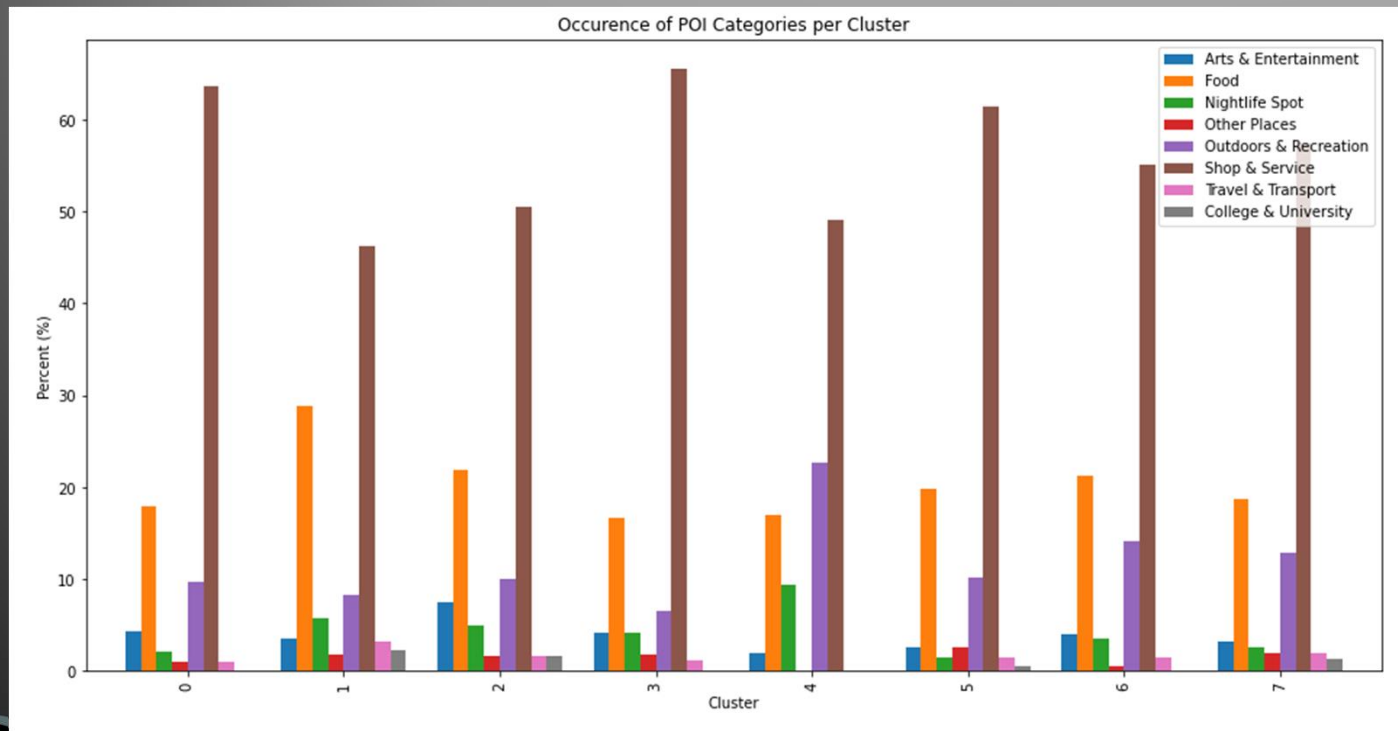
Results – Map of Clusters

- ▶ k-Means segmented the POIs into 8 clusters



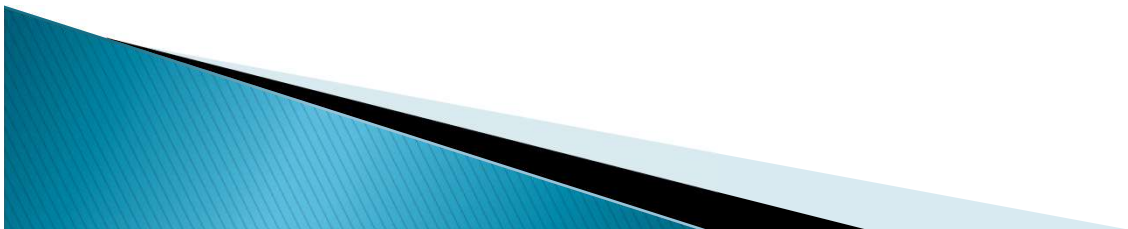
Results – Categories

- ▶ Found percent of POIs in each category in each cluster
- ▶ Bar graph helps to see where some differences occur



Discussion

- ▶ For the most part, all clusters/neighborhoods have a good representation of categories
- ▶ Three neighborhoods might appeal to certain people
 - 1: has lots of food and the most transportation options
 - 2: well represented by arts & entertainment
 - 4: has more outdoor & recreation, as well as lots of nightlife



Conclusion

- ▶ Stamford, CT can segmented into eight neighborhoods/clusters
- ▶ All of the clusters provide a good variety of amenities
- ▶ One may be able to focus on other requirements when looking to move to Stamford without missing out on amenities
- ▶ Lots more data can be mined!

