Ice Cream in Salt Lake City

DETERMINING LIKELY AREAS FOR ICE CREAM PARLORS IN SALT LAKE CITY

Background

- Salt Lake City and northern Utah are growing rapidly
- Tech industry is fueling growth with companies like Adobe, Microsoft, Facebook, and Vivint Solar building sites
- Increasing opportunities for food services to establish new venues
- Looking for a good spot to establish an ice cream parlor
  - Either for people looking to establish their own or a franchise looking to expand

Problem

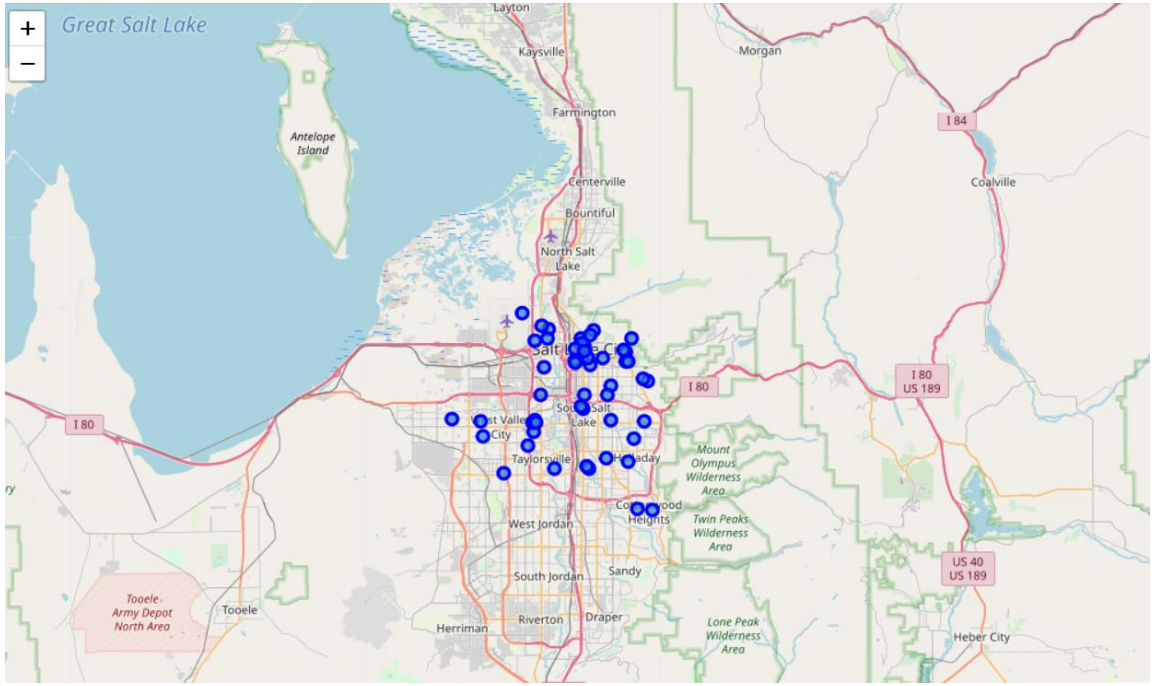
- Many food service venues fail within the first 6 months
- Looking at established venues in each zip code for clues of good areas for ice cream parlor
  - Too many dessert places means stiff competition
  - Complementary businesses increase number of people visiting the area
    - Stadiums
    - Theaters
    - Business districts
    - Malls
    - Transportation hubs
    - Tourist sites

Data, data, data

- Foursquare analysis for determining what venues (both competitors and complimentary businesses) are in each zip code
- http://www.heartandcoeur.com/heart_travel/area/utah_801.php has a table of zip codes for the Salt Lake City, Utah area
- https://www.zip-codes.com/city/ut-salt-lake-city.asp has information about the population of these zip codes
- http://saltlakecity.areaconnect.com/zip2.htm?city=Salt has the geographical coordinates of each zip code

Exploratory Data Analysis

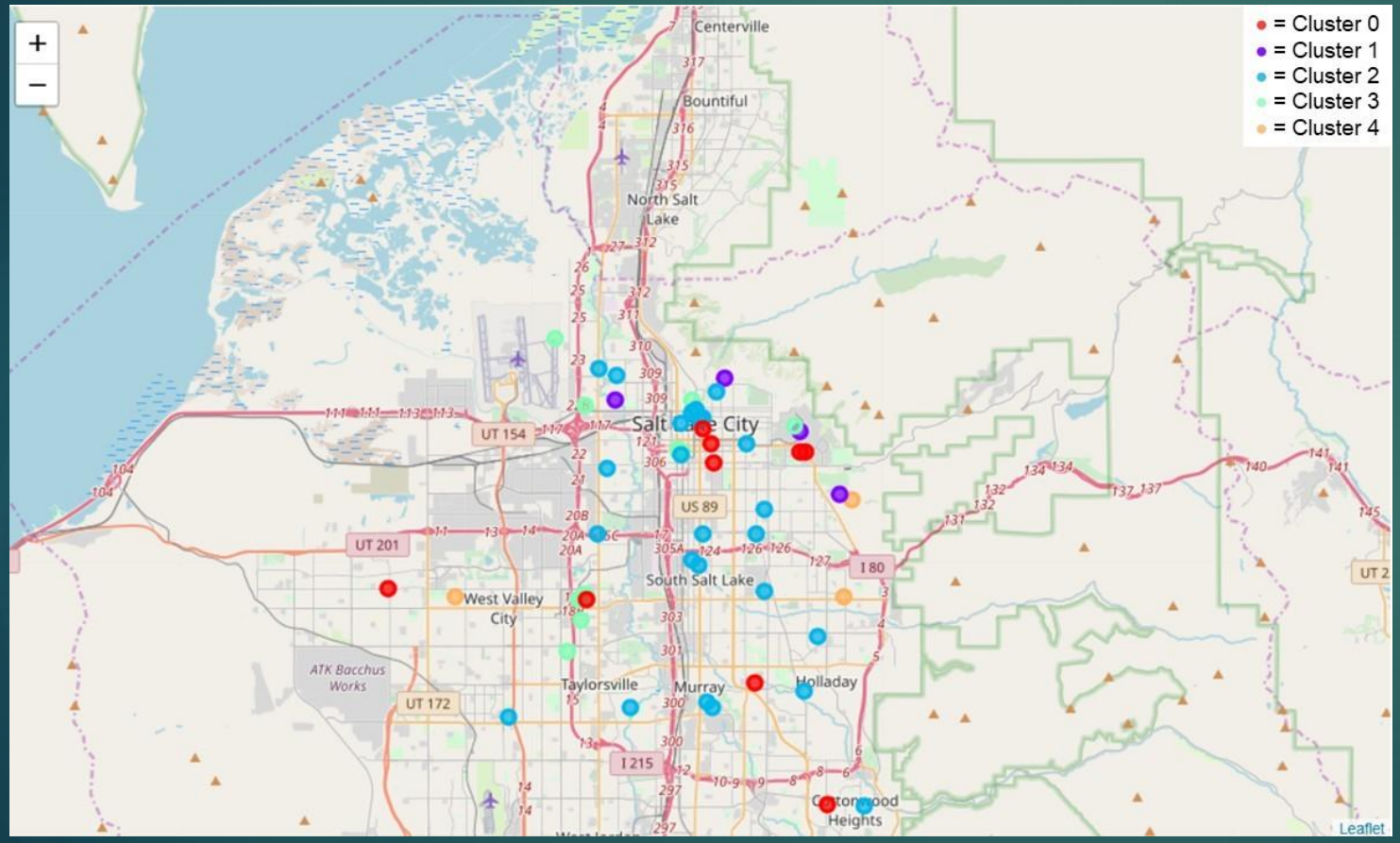
- Table compiled identifying the number of businesses in each zip code, population, and coordinates
- Businesses lumped together in broad categories for analysis
  - Attractions
  - Business district
  - Shops
  - Restaurants
  - Dessert venues
  - Travel
- Restricted zip codes analyzed to those in SLC with venues
- Mapped

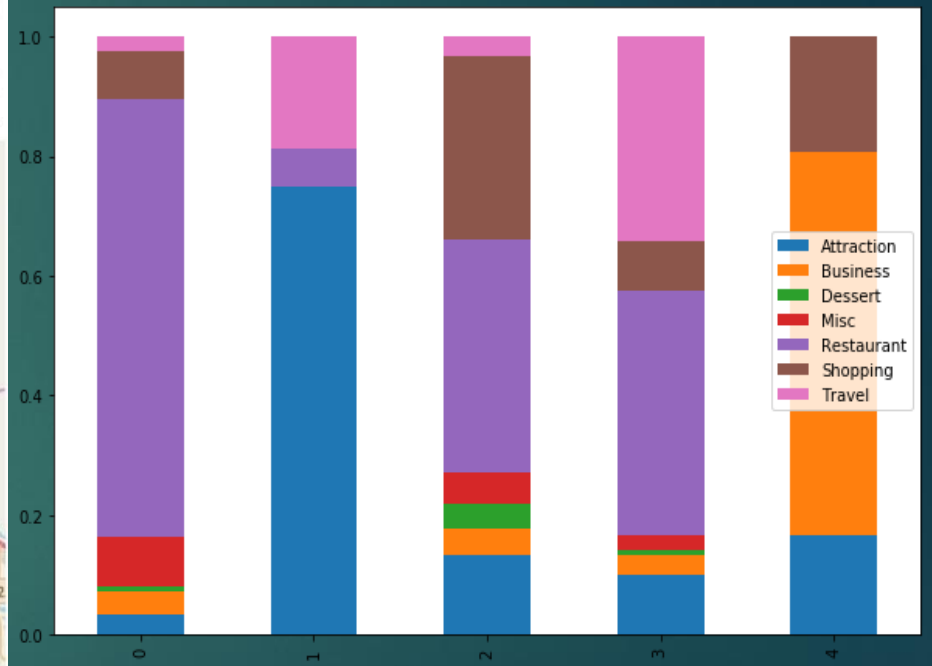


Clustering neighborhoods

- Used k-means clustering to group neighborhoods with similar characteristics
- Provided an easy means to display which areas had characteristics that are desirable for a new venue
  - Less competitors (dessert venues and restaurants)
  - More complimentary businesses (attractions, businesses, shopping, etc.)
- Clusters were mapped and the percentage of types of venues were shown in a stacked bar chart

Map

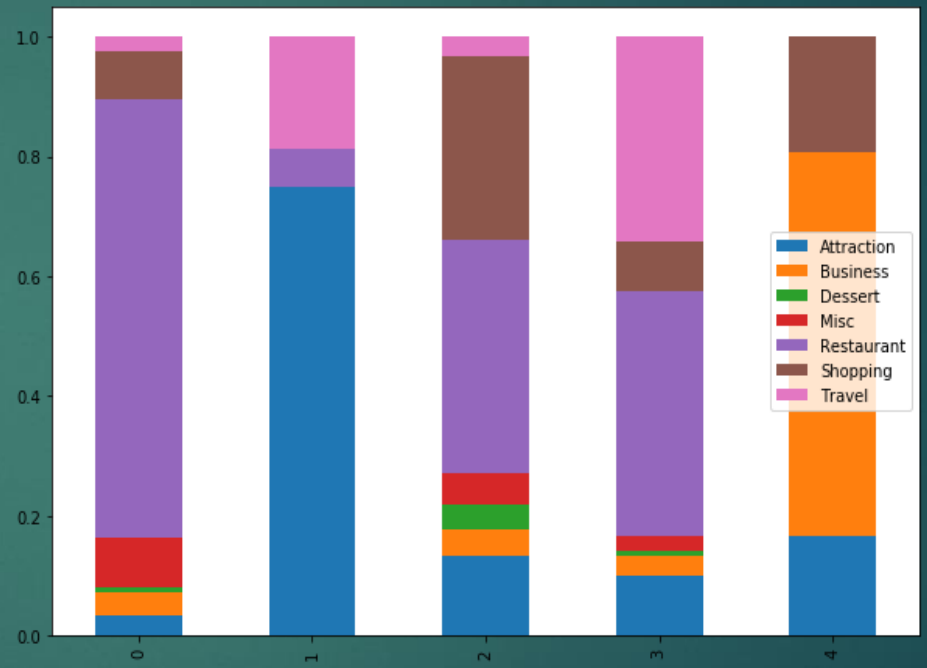




Stacked bar chart of the average percentage for each category in each zip code cluster

Results and discussion

- Clusters 1 and 4 may have untapped potential
  - Few competitors
  - Mostly businesses, shopping districts, attractions, and a few restaurants (in cluster 1)
  - Developing areas on the east, north, and west edges of the city
- Clusters 0, 2 and 3 more difficult
  - High amount of competitors
  - Restaurants most common venues by far



Stacked bar chart of the average percentage for each category in each zip code cluster

Conclusions and Future Directions

- Zip codes in clusters 1 and 4 may have untapped potential
- Further examination:
  - Parking
  - City zoning
  - Cost of renting or buying location
  - Traffic levels

	Zip Code	Cluster Labels
0	84103	1
1	84112	1
2	84153	1
3	84158	1
4	84108	4
5	84109	4
6	84170	4