

SILICON HILLS VS. TECH CHAMPIONS

**NEIGHBORHOOD VENUE ANALYSIS AMONG
AUSTIN, SEATTLE, AND SAN FRANCISCO**

AUSTIN IS GROWING FAST AND THE AREA IS NICKNAMED SILICA HILLS

- What are the difference with respect to neighborhoods venues between Austin and tech champions like Seattle and San Francisco?
- How can Austin improve its neighborhood venues to match Seattle and San Francisco?



DATA SOURCE AND TREATMENT

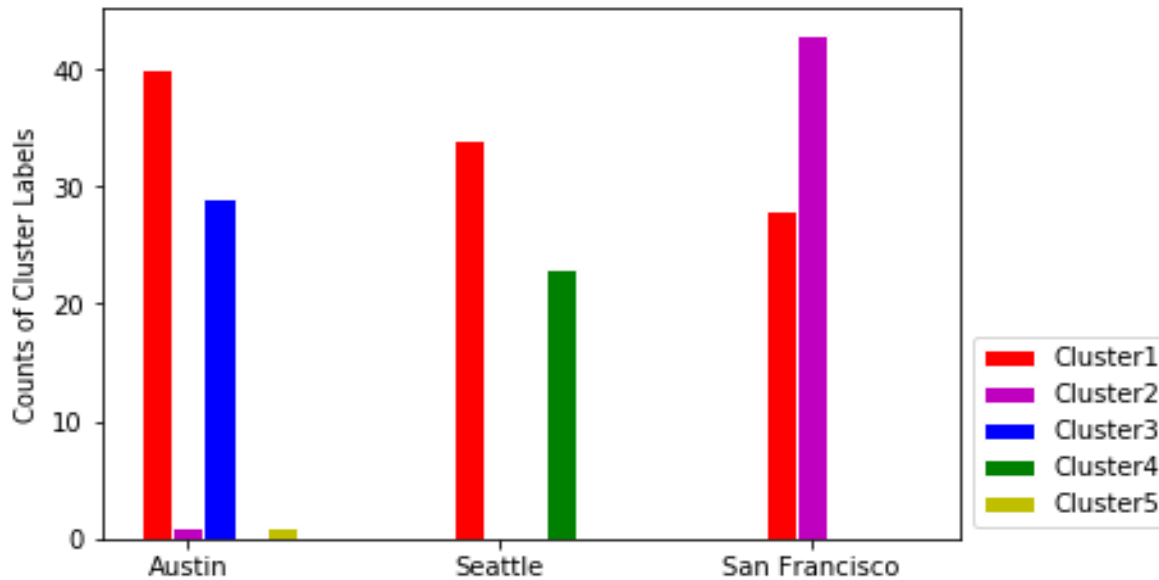
- Zip code as surrogate of neighborhoods
 - Zip code and latitude, longitude downloaded from:
 - <https://public.opendatasoft.com/explore/dataset/us-zip-code-latitude-and-longitude/export/>

- Venue data from Foursquare API



- Zip code is clustered using kmeans with respect to most common venues from Foursquare

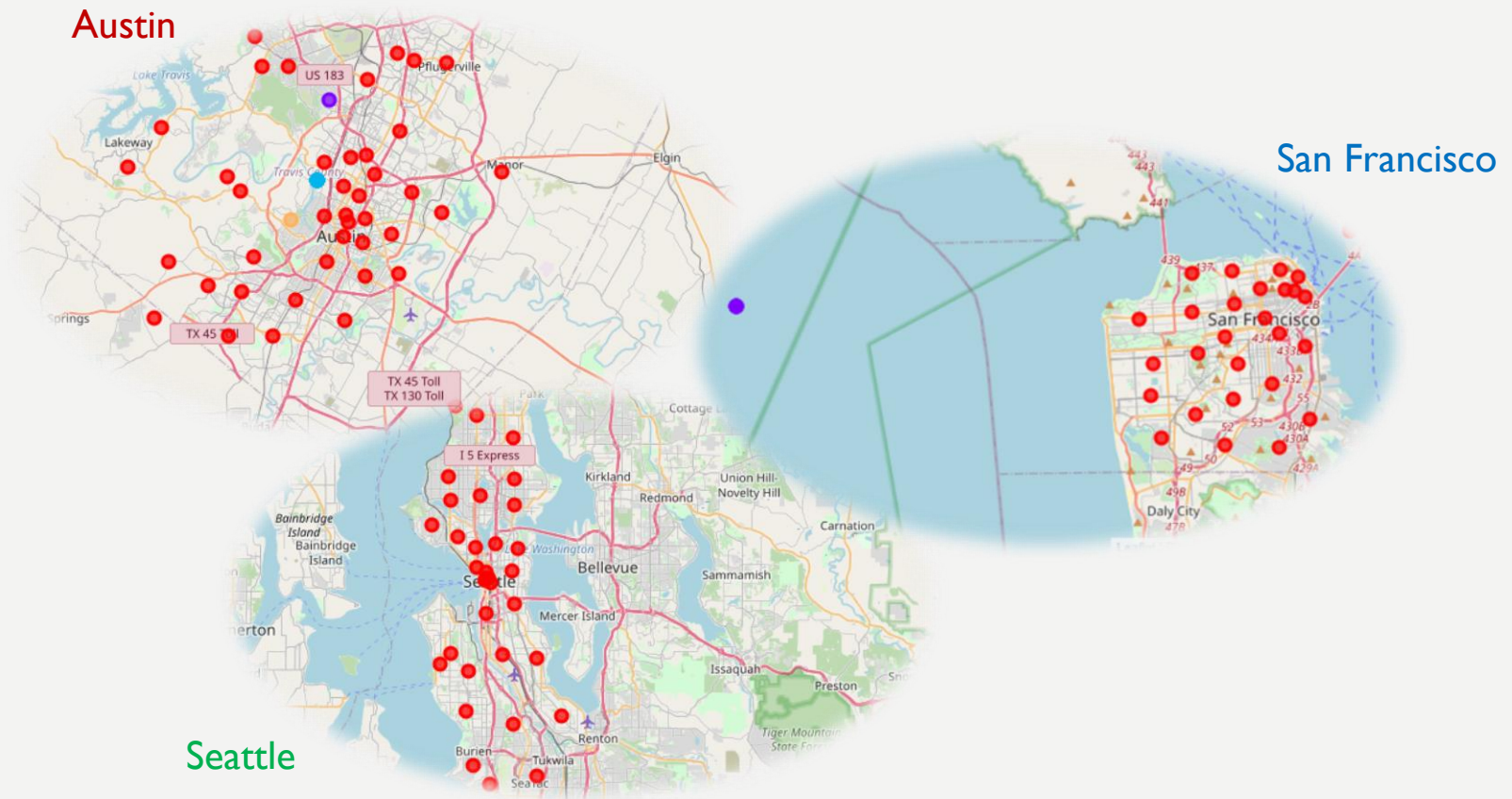
ZIP CODE CLUSTERING RESULTS



- Cluster 1 is important in all three cities
- Only Austin has Cluster 3
- Only Seattle has Cluster 4
- Only San Francisco has significant Cluster 2



CLUSTER1 IS EVENLY DISTRIBUTED, ALL OTHER CLUSTERS ARE SPORADIC



CONCLUSIONS

- kmeans and word cloud are power tool to cluster and visualize venue composition of each zip code.
- Austin is more similar to Seattle than to San Francisco.
- All three cities have many zip codes whose primary venues are restaurants.
- San Francisco stands out in term of farmers market and fabric shops probably thanks to its more liberal living culture.
- Austin can improve its attraction to tech companies by develop more farmers market like San Francisco and develop more lawyer office like Seattle.