

Siting a new coffeeshop in Denver

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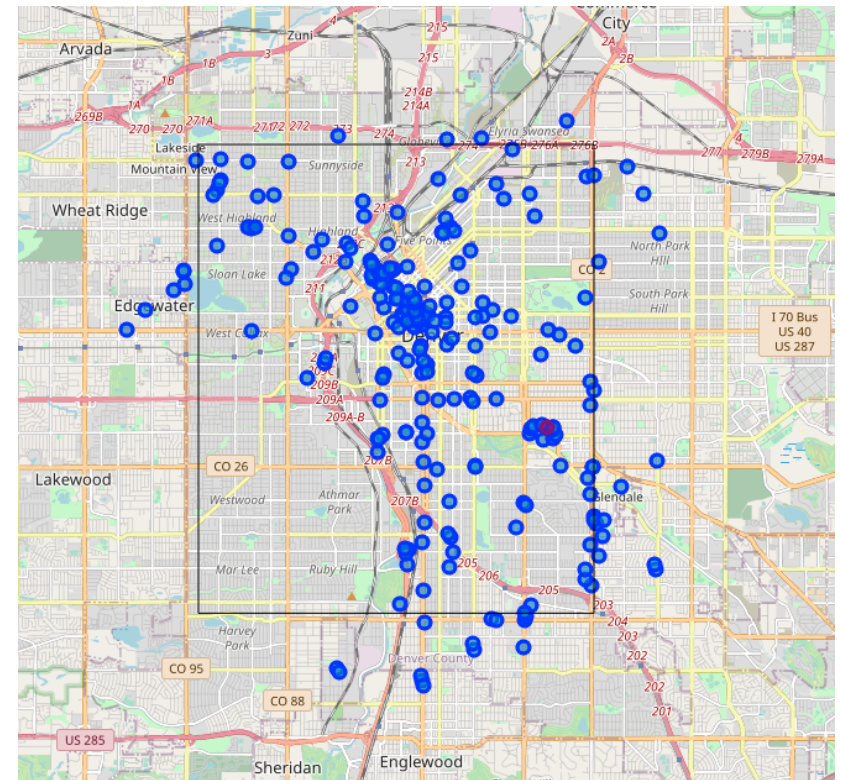
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Goal + Methodology

- The goal is to find out where in the city of Denver a new coffeeshop could be opened.
- Criteria are that there are few other coffeeshops, in particular few trending coffeeshops, but that there are other businesses.
- City of Denver is taken to be square between 39.68 and 39.78° latitude, -104.94 to -105.05° longitude
- Location data for coffeeshops, trending coffeeshops, and all businesses is obtained using multiple calls to Foursquare API
- Data is tidied and analyzed using Python, Numpy, Pandas, clustered using K-Means from scikit-learn, and plotted using Matplotlib and Folium maps.

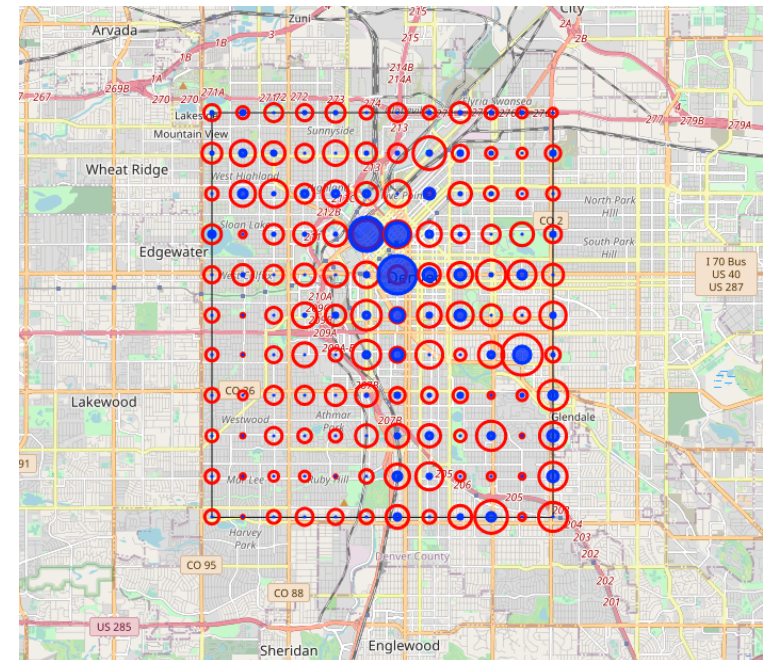
Existing Cafes in Denver

- Blue = coffeeshop
- Purple = trending coffeeshop
- Almost no trending coffeeshops
- South-west is entire devoid of coffeeshops even though it's residential



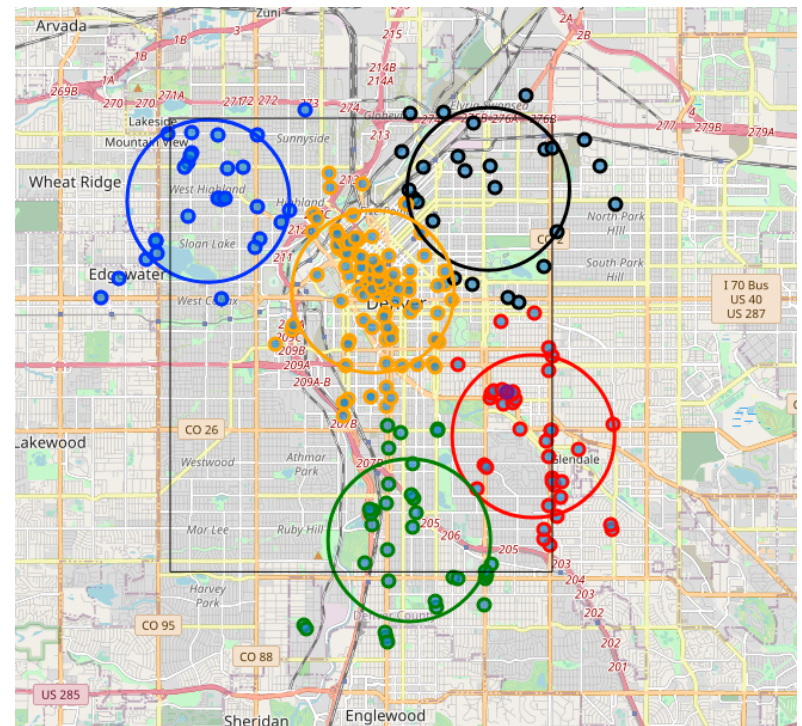
Density of existing cafes and businesses

- Blue circle: size represents number of coffeeshops within 1km²
- Red circle: size represents number of businesses within 1km².
- Parts of south-west have many businesses but almost no coffeeshops.
- North-east has few coffeeshops but also few businesses total



Clustering existing coffeeshops

- 5 clusters optimum for K-Means clustering
- Coffeeshops color-coded by clusters, approximate cluster size shown
- Most coffeeshops in yellow “downtown” cluster
- Additional areas with few coffeeshops due north and east of yellow cluster (on top of obvious gap in south-west).



Conclusion

- Specific areas in south-west of Denver, particularly around Athmar Park, are ideal for new coffeeshop because there is little competition but many other existing businesses to bring in customers.
- Downtown and north east are likely poor locations, former already has many coffeeshops, latter has no few businesses overall.
- Small area due east of downtown may be a second choice for siting a coffeeshop: little competition, and two parks.