Finding Similar Neighborhoods

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Finding Similar Neighborhoods to Enhance Moving Satisfaction
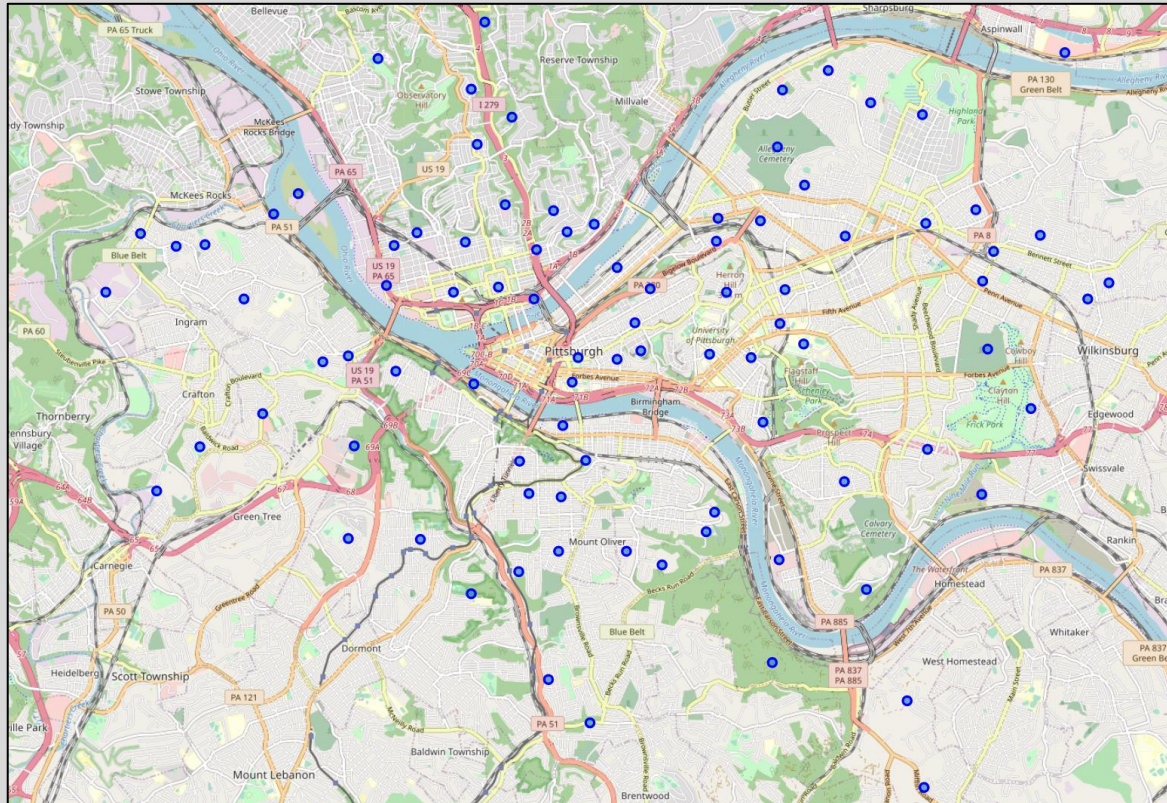
◦ My Family and I are considering moving back to Pittsburgh, PA and would like to find a neighborhood similar to our current neighborhood in Austin, TX

◦ In our current neighborhood, we enjoy the space we have as well as the abundant amenities due to proximity to downtown and south Austin
  ◦ Amenities include great restaurants, parks, eclectic shops, coffee houses and more

◦ If we can find neighborhoods in Pittsburgh that share similar amenities to that of our current neighborhood, it will increase our chances of satisfaction with the neighborhood we move to in Pittsburgh and decrease the risk of another costly move

Data Acquisition and Cleaning

◦ Pittsburgh neighborhood data was obtained from the Western Pennsylvania Regional Data Center (https://data.wprdc.org/dataset/neighborhoods-with-snap-data/resource/cdea4e5c-646d-4924-84b1-afc3a7206eb9)

◦ Austin neighborhood data was obtained by using the Geopy library

◦ Amenities/Venues data was obtained by using Foursquare's location data/API (https://foursquare.com/city-guide)

◦ Pittsburgh neighborhood data contained 90 rows and 190 features in the raw data set
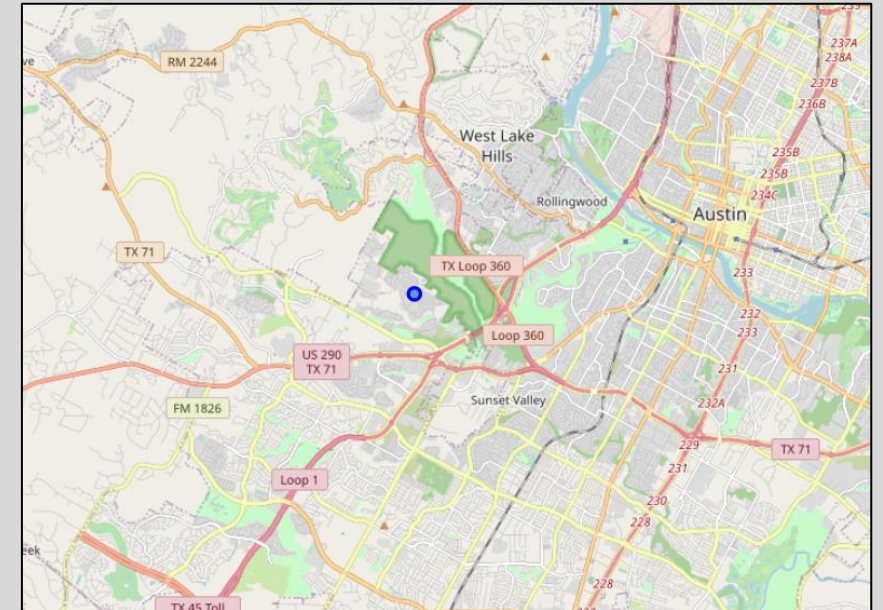 ◦ That was trimmed down to 90 rows and 3 features, Neighborhood Name and Latitude/Longitude
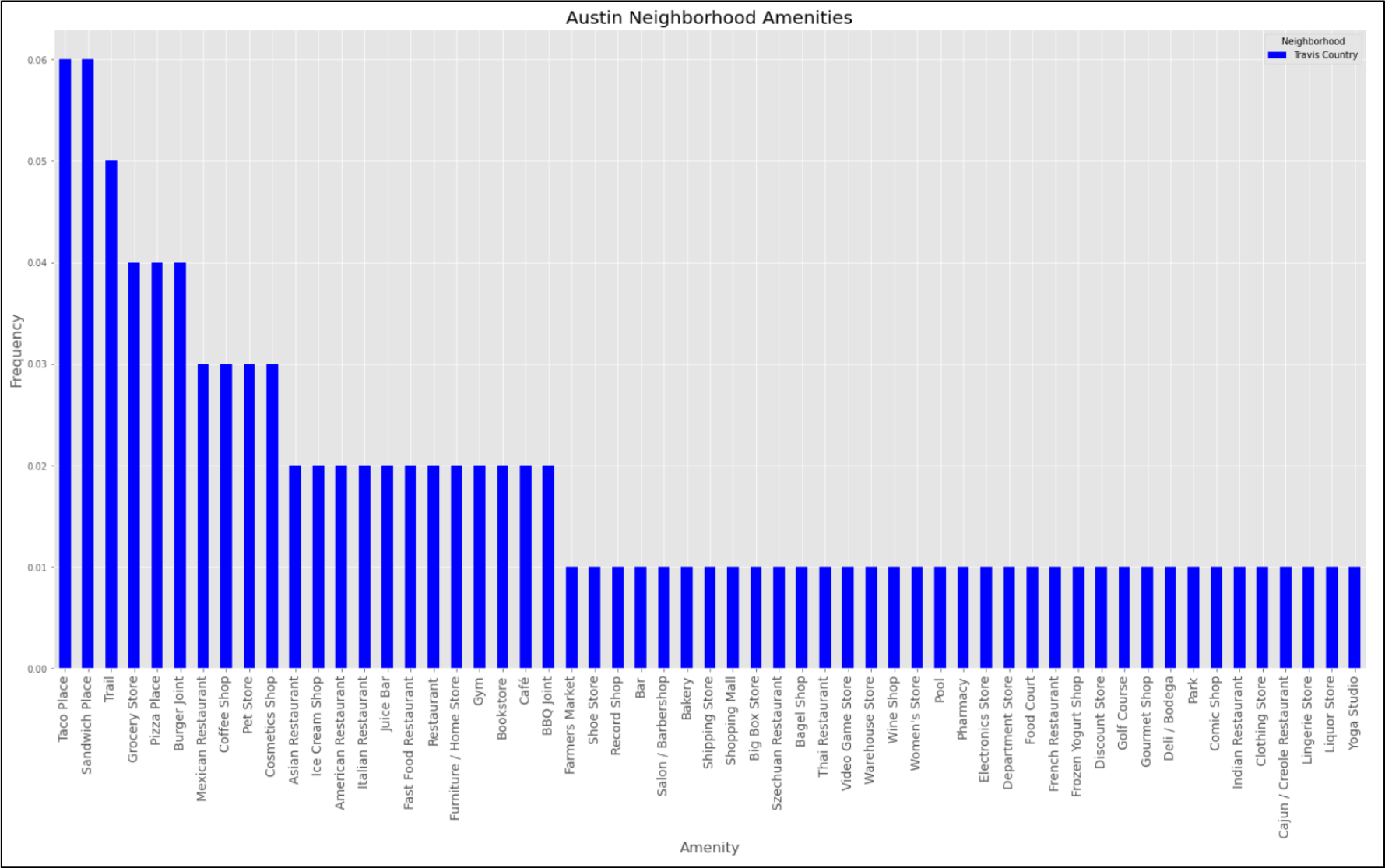
Neighborhoods

Pittsburgh, PA

Austin, TX

⬤ Neighborhood Location

Most Common Venues Austin Neighborhood
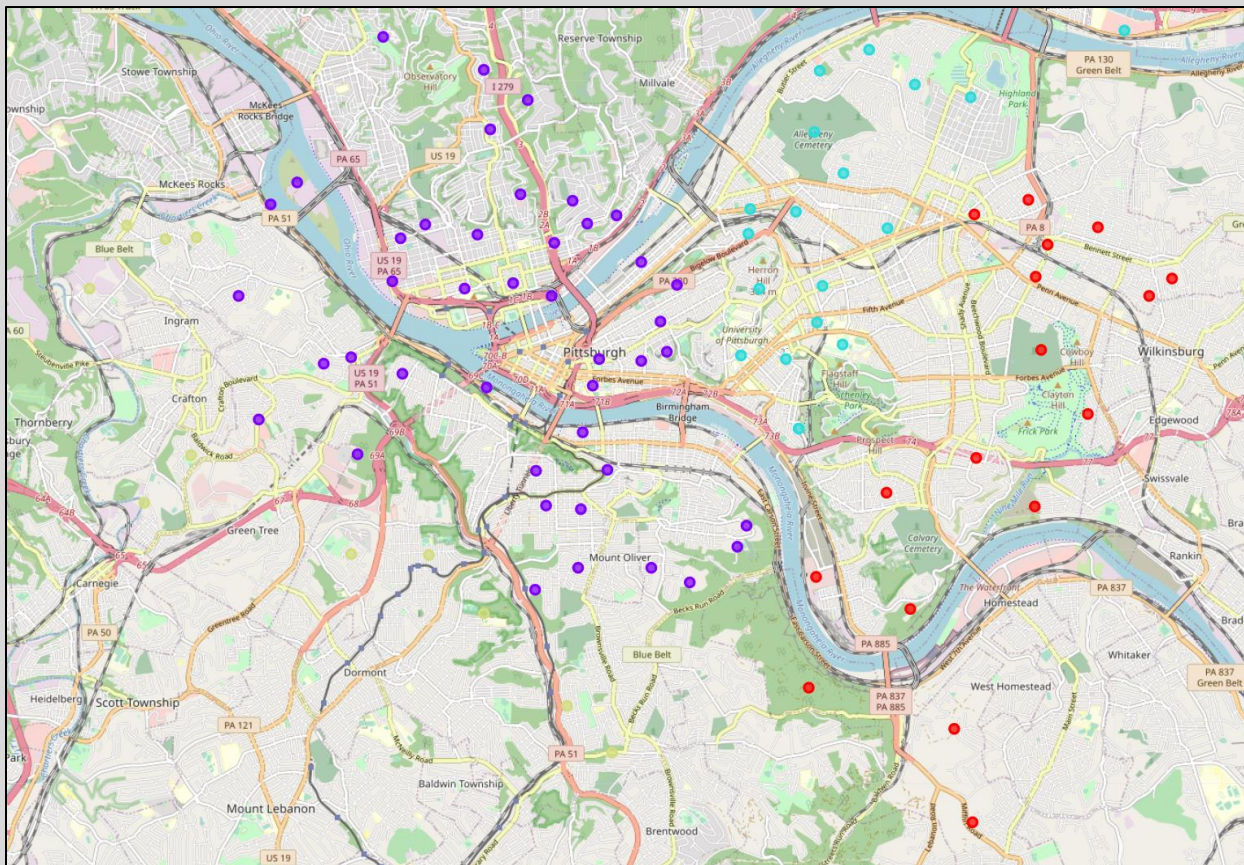

Austin Neighborhood Amenities

Sample of Most Common Venues

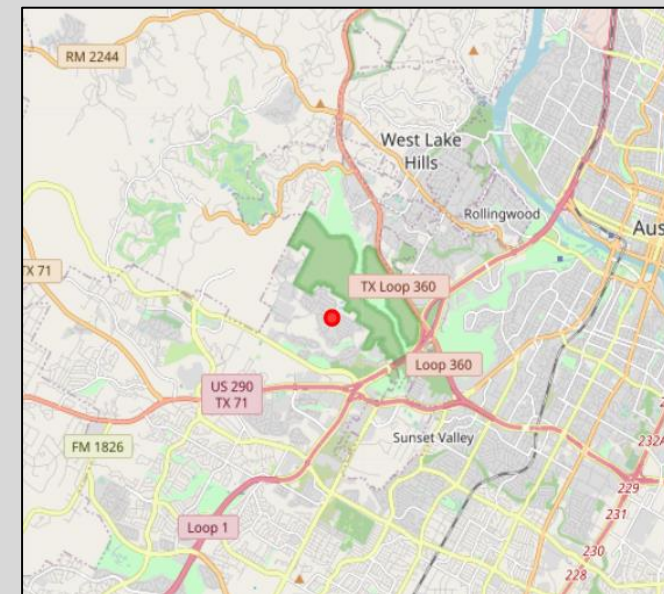| Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
Allegheny Center	Hotel	Sandwich Place	American Restaurant	Scenic Lookout	Bar	Grocery Store	Seafood Restaurant	Italian Restaurant	Thai Restaurant	Coffee Shop
Allegheny West	American Restaurant	Hotel	Scenic Lookout	Bar	Coffee Shop	Bakery	Seafood Restaurant	Sandwich Place	Thai Restaurant	Grocery Store
Allentown	American Restaurant	Hotel	Bar	Seafood Restaurant	Scenic Lookout	Ice Cream Shop	Coffee Shop	Thai Restaurant	Italian Restaurant	Burger Joint
Arlington	American Restaurant	Hotel	Ice Cream Shop	Bar	Pizza Place	Coffee Shop	Bakery	Snack Place	Burger Joint	Scenic Lookout
Arlington Heights	American Restaurant	Ice Cream Shop	Bakery	Bar	Hotel	Pizza Place	Coffee Shop	Cocktail Bar	Park	Plaza
Banksville	Coffee Shop	Ice Cream Shop	Italian Restaurant	American Restaurant	Scenic Lookout	Pizza Place	Bakery	Mexican Restaurant	Thai Restaurant	Brewery
Bedford Dwellings	American Restaurant	Coffee Shop	Hotel	Brewery	Bar	Ice Cream Shop	Bakery	Thai Restaurant	Cocktail Bar	Plaza
Beechview	Pizza Place	Italian Restaurant	Ice Cream Shop	Scenic Lookout	Bar	Coffee Shop	Hotel	American Restaurant	Park	Sandwich Place
Beltzhoover	American Restaurant	Hotel	Bar	Ice Cream Shop	Scenic Lookout	Seafood Restaurant	Burger Joint	Coffee Shop	Taco Place	Thai Restaurant
Bloomfield	Coffee Shop	Bakery	Brewery	Grocery Store	Ice Cream Shop	American Restaurant	Park	Thai Restaurant	Cocktail Bar	Bar
Bluff	Hotel	Bar	American Restaurant	Sandwich Place	Coffee Shop	Grocery Store	Seafood Restaurant	Thai Restaurant	Bakery	Ice Cream Shop
Bon Air	American Restaurant	Bar	Ice Cream Shop	Coffee Shop	Scenic Lookout	Hotel	Seafood Restaurant	Italian Restaurant	Thai Restaurant	Snack Place
Brighton Heights	Bar	American Restaurant	Italian Restaurant	Coffee Shop	Pizza Place	Park	Seafood Restaurant	Mexican Restaurant	Grocery Store	Diner
Brookline	Ice Cream Shop	Coffee Shop	Pizza Place	Italian Restaurant	American Restaurant	Scenic Lookout	Hotel	Seafood Restaurant	Brewery	Bar
California-Kirkbride	Hotel	American Restaurant	Scenic Lookout	Bar	Sandwich Place	Grocery Store	Seafood Restaurant	Coffee Shop	Thai Restaurant	Park
Carrick	Pizza Place	Italian Restaurant	American Restaurant	Bar	Bakery	Ice Cream Shop	Coffee Shop	Chinese Restaurant	Pub	Brewery
Central Business District	Hotel	Bar	American Restaurant	Thai Restaurant	Seafood Restaurant	Ice Cream Shop	Sandwich Place	Coffee Shop	Italian Restaurant	Brewery
Central Lawrenceville	Coffee Shop	Brewery	Bakery	Ice Cream Shop	Bar	Grocery Store	Cocktail Bar	Vegetarian / Vegan Restaurant	Italian Restaurant	Park
Central Northside	Hotel	American Restaurant	Sandwich Place	Scenic Lookout	Coffee Shop	Bar	Seafood Restaurant	Grocery Store	Thai Restaurant	Sculpture Garden
Central Oakland	Coffee Shop	Ice Cream Shop	American Restaurant	Bakery	Brewery	Park	Pizza Place	Cocktail Bar	Bar	Grocery Store
Chartiers City	American Restaurant	Coffee Shop	Pizza Place	Bar	Gas Station	Scenic Lookout	Sandwich Place	Park	Italian Restaurant	Seafood Restaurant
Chateau	American Restaurant	Bar	Hotel	Scenic Lookout	Coffee Shop	Italian Restaurant	Sandwich Place	Park	Concert Hall	Thai Restaurant
Crafton Heights	American Restaurant	Bar	Coffee Shop	Scenic Lookout	Sandwich Place	Hotel	Gym	Pizza Place	Thai Restaurant	Burger Joint
Crawford-Roberts	American Restaurant	Hotel	Bar	Ice Cream Shop	Thai Restaurant	Sandwich Place	Coffee Shop	Vegetarian / Vegan Restaurant	Gastropub	Taco Place
Duquesne Heights	Hotel	American Restaurant	Bar	Italian Restaurant	Scenic Lookout	Plaza	Park	Seafood Restaurant	Sandwich Place	Coffee Shop

*Sample of first 25 neighborhoods (in alphabetical order) and their 10 most common venues. Process completed for all 91 neighborhoods.

Clustering of Neighborhoods
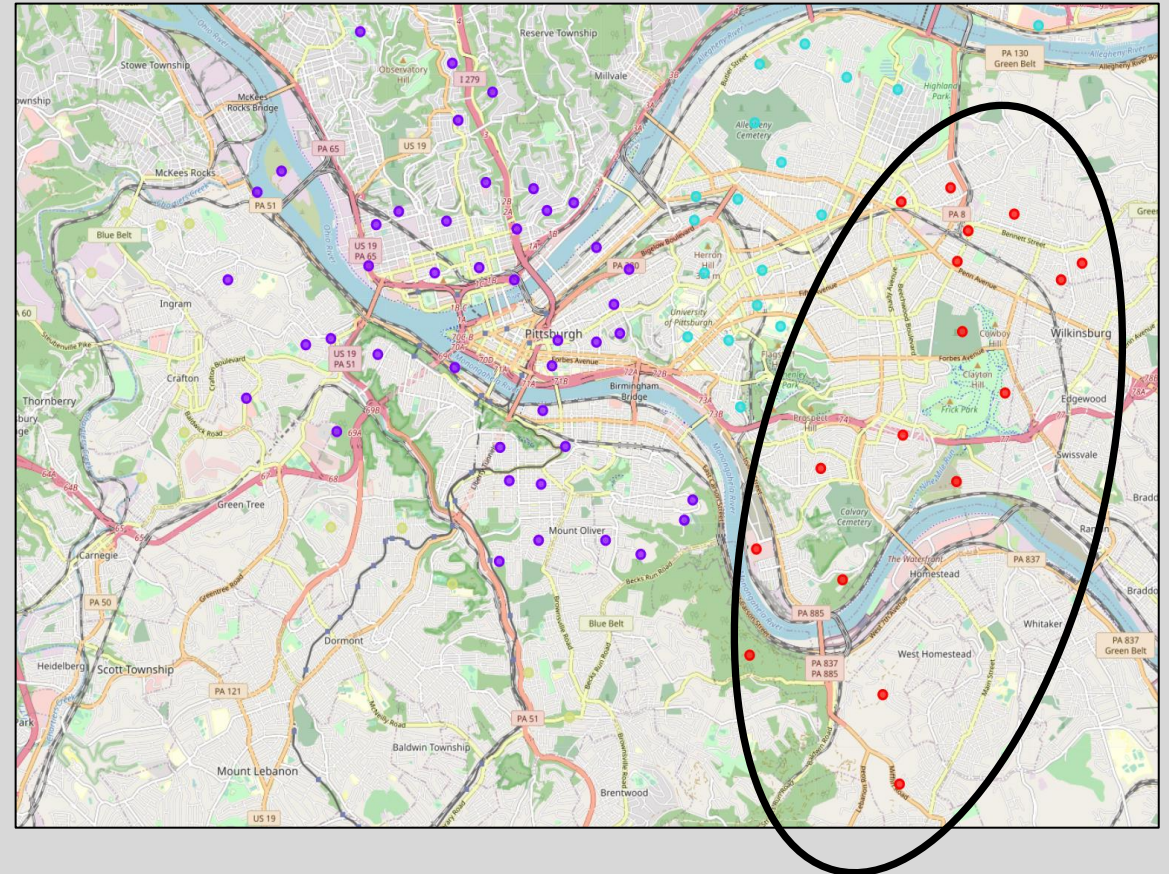

Pittsburgh, PA

Austin, TX

Cluster 0
Cluster 1
Cluster 2
Cluster 3

Most Similar Neighborhoods to Ours

○ In Cluster 3 are the neighborhoods that were most similar to our neighborhood in Austin

○ Neighborhoods we should consider moving to are:

   ○ New Homestead, East Liberty, Homewood West, Larimer, Homewood South, Lincoln Place, Point Breeze North, Hays, Regent Square, Swisshelm Park, Point Breeze, Squirrel Hill South, Greenfield, East Hills, Hazelwood, Homewood North and Glen Hazel.

🟣 Cluster 0

🔵 Cluster 1

🟡 Cluster 2

🔴 Cluster 3

Conclusions

○ Built successful model to cluster together neighborhoods to find similar neighborhoods between different cities in different states

○ Used this to find neighborhoods in Pittsburgh that my family would most enjoy based on our current neighborhood's amenities

○ In the future would like to incorporate crime statistics and housing prices to further narrow in on the best neighborhood for us