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Abstract

Using KMeans to classify multi-city neighborhoods into like-clusters

Person Relocation Exercise

Coursera Data Science Capstone

## Business Problem

This project stems from my own personal interests, as well as the interests of a few of my close friends. We have always discussed among ourselves where we would want to move if we were to leave the city of Boston. We generally drifted to a few cities: New York, Denver, Seattle, and Montreal. Consequently, I had the idea of using the Foursquare location data from the IBM Data Science capstone to help guide some of our discussions.

For the capstone project, I wanted to push this analysis a bit further. My friends and I live in Boston, but we live in different neighborhoods and different parts of the city. What if I could investigate the neighborhoods of other cities and see which ones more closely resembled the ones here in Boston. I had the idea of taking myself, and two of my buddies, choosing their neighborhoods, and seeing how they would fit in two other cities: Denver and Seattle.

With regards to how this would be relevant from a business case perspective; we can imagine ourselves to be recruiters, who are trying to figure out the best and most satisfactory way of moving talent from one city to another. Say, as a recruiter, I have a client who lives in relatively popular part of Boston, what would be the best neighborhood to suggest they move to in Denver? We can then take this example and apply it to all our clients, assuming they want to move to a neighborhood that closely resembles the one they are moving from.

In this specific business case, I will be looking at three individuals from three neighborhoods. They all live in Boston, and then I will recommend similar neighborhoods for these individuals in Denver, CO and Seattle, WA. I will run the K-means algorithm to group neighborhoods first within cities, then compare them across cities. The end result will be that the individuals will be able to move to a new city to a neighborhood that is similar to the one they left.