

IBM Applied Data Science Capstone Project

Business Problem

This project aimed to find the best neighborhood for opening a new mall in Denver, Colorado by comparing the Toronto data set. Here are some questions that will be answered to decide the best neighborhood for the new mall.

1. Should the new mall be close to restaurants or more residential areas?
2. Should the new mall be in more multicultural neighborhoods?
3. Should the new mall be accessible with variety of public transportations?

In this project, I compare two cities, Toronto and Denver, in order to find the best options to build a new Shopping Mall. I use Toronto as an example to project city plan on Denver neighborhoods. According to my work, there is no correlation between shopping malls and other venues.

Therefore, I decided to find where are the shopping malls are in Toronto. I decided to use Boroughs in Toronto instead of Neighborhoods. Because Toronto is much bigger than Denver, and I thought that Boroughs are already clusters of Neighborhoods. And it will make it easier to categorize. This point is totally depending on your decision.

Since I didn't get any significant correlations between Toronto variables, I decided to chose the most common ones. I will just use the highest negative or positive correlations. Which are Shopping Mall, Gym / Fitness Center, Juice Bar, Liquor Store, Japanese Restaurant.

According to this outcome, I decided to build a new Shopping Mall near the Gym/Fitness Centers. Because, I found the highest correlation with Liquor Store. But also I though that liquor store might be in the Shopping Mall as well. Then the second most correlated variable was Gym/Fitness Center.

Building a Gym/Fitness Center near the Shopping Mall made much more sense for me. Because, Gym/Fitness Centers mostly adopted Subscription Revenue model. Which means that the clients are paying monthly and they make at least a year of contract with the Gym/Fitness Centers.

One person with Gym/Fitness Center subscription will come to Gym/Fitness Center at least twice a week. According to my marketing perspective, I would build a new Shopping Mall near the Gym/Fitness Centers where people regularly visit.

For the further decision, I will use some BI tools to visualize the data and make a decision. I will use Tableau Data Analysis tool for comparing populations of these neighborhoods. I will collect population information of these neighborhoods from <https://www.city-data.com/>.

According to data, Windsor is the most populated neighborhood between. Therefore, according to all those considerations, as a final decision, I would prefer to build a new Shopping Mall in Windsor, Denver.

Population by Neighborhoods of Denver, Colorado

Neighborhood	
Windsor	25,330
Washington Virginia Vale	17,154
Hampden South	14,550
Northeast Park Hill	13,621
Virginia Village	12,454
Congress Park	11,684
East Colfax	10,438
North Park Hill	10,351
South Park Hill	10,174
Lowry	9,349
Goldsmith	7,399
Southmoor Park	6,595
University Hills	6,086
Cory-Merrill	6,017
Kennedy	5,044
Cole	4,463
Belcaro	4,313
Wellshire	3,766
Country Club	3,721
Hilltop	2,250

