The Battle of Neighborhoods: Quality of living

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Introduction

- Topic:
  - For this project, I have done some exploration on quality of living between two cities using the knowledge I have acquired from the *IBM data science course* from Cousera.

- Background:
  - Those two cities I am using for the comparison are:

Dallas (Texas)   Boston (Massachusetts)

Data Selection

- There are two data set I used for this project:
  1. The Foursquare data for specific location
  2. The rental cost forecasting data from Zillow

- Some additional resources:
  1. Income tax calculator from Google

Methodology

The quality of living should consider from two parts:

1. The living rating
   ◦ For living rating, the area radius is set as 2000 meters (1.24 miles, a comfortable biking distance)
   ◦ Things I care the most: Gym, Grocery, Food place, and Shopping place

2. The salary requirement for maintain the living standard
   ◦ Mainly focus on taxes and the cost of living, but I ignored the culture influence to the cost of living in both area

The exploratory analysis is completed on Jupyter Notebook with Python 3.7

1. For the code, please refer to the github link:

Comparison (living standard)

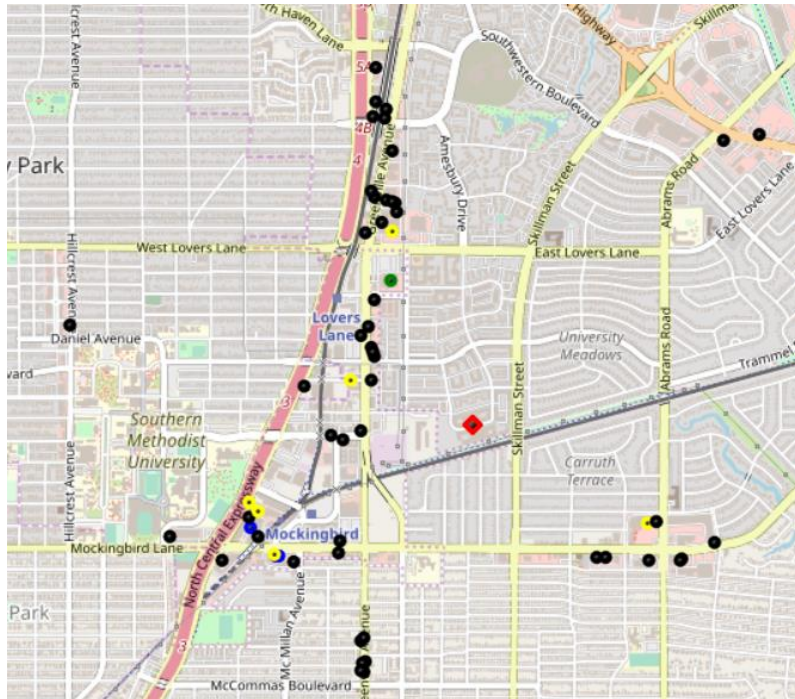| Dallas	Boston
Address: 4601 Amesbury Drive	Address: 205 Revere Beach Pkwy
Apartment: The teak	Apartment: One Beachmount
Monthly Cost: $1400	Monthly Cost: $2400
# of Food place: 49	# of Food place: 33
# of Grocery place: 1	# of Grocery place: 1
# of Shopping place: 3	# of Shopping place: 0
# of Gym: 6	# of Gym: 1

Comparison (living standard) continuous

Dallas

Boston (Revere)
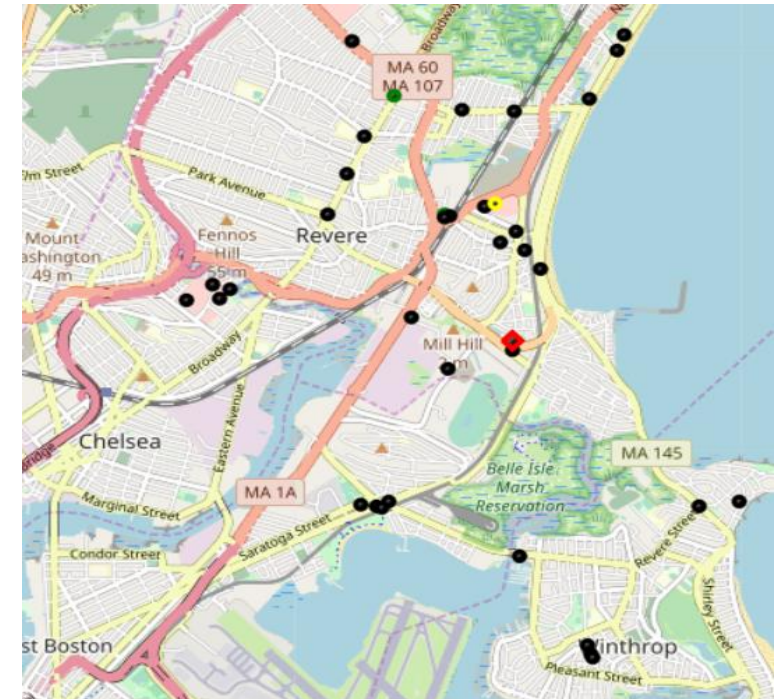

Red: Apt
Black: Food
Yellow: Gym
Blue: Shopping
Green: Grocery

Comparison (living standard) overall

From a quality of living perspective, the "expected" area is similar to the are I used to live at. Both areas have a decent number of eating places with access to Gym nearly (ride a bike is an option to the Gym).

Good part of living in Boston:

1. Beach view

2. Public transportation (Train & Shuttle)

Downside of living in Boston:

1. Expected high living cost

2. Less enjoyable owes a car (road condition, bad weather, gas price)

3. Less Basketball game (less Gym)

Overall, I believed the **quality of living are the same** in both area

Comparison (Cost of living)

From Zillow's data, the cost of living forecasting for renting is :

```
Dallas-Fort Worth, TX : $ 1518
Annually Cost:  18216
Boston, MA : $ 2348
Annually Cost:  28176
```

Suppose the annual salary in Dallas is $55,000

After tax =>$44,954
After Rent => $26,738 (-$18,216)

Monthly spend=$1,800

After monthly spending=>$5,138 (-12*$1,800)

To maintain the same standard=>$5,138

Monthly spending=$1,800

Before Monthly spending=>$26,738 (+12*$1,800)

Before Rent => $54,914 (+$28,176)
Before Tax (in Boston)=> nearly $75,000

Conclusion

The entire analysis is a basic analysis of considering Salary Match. Please be aware I have not consider the culture influence in both area, which may stronly affect the monthly cost. As we can see, we probably need to get pay 36.4% (20000/55000) in order to keep the quality of living nearly the same in Boston.

All caculation is more like a consideration from an entire fmaily's perspective. If you were an adult who just graduated from college, you may want to think about the opportunty vesus the living quality

Thank You