IBM Applied Data Science Capstone

Using Python for researching a neighborhood before buying a house in the Southwest Houston area

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June 2020

1. Introduction

Houston is one of the fastest growing and most diverse places in the United States. Wealth of job opportunities is bringing people to move in Houston, and thanks to the influx of new residents and median income growth rate that exceeds the national rate, newer and cheaper houses are being built.

1.1. Description of the Problem

Buying a house in Houston seems like a no brainer. However, for most people the whole process of buying a house is a hassle; it doesn't matter if the house will be for personal use or rental purposes, every person should conduct an extensive research before making such an important decision. Researching the market as per preference and budget along with looking into the neighborhoods is time consuming, therefore with this project I am looking to ease the process by applying data science methodology.

1.2. Target Audience

This project is useful for people looking to buy a house in Southwest Houston area. I will use Python language to gather real estate information, crime index per neighborhood and venues from different sources and present them to you in order to help you buying a new house in Houston.

2. Data

For this project we will use data from the following sources:

- Zillow: From this website I will get information of real estate properties in Southwest Houston; including address, that I will use the get latitudes and longitudes in order to map each property.

- Neighborhood Scout: This website will be used to extract crime index information for each neighborhood in Southwest Houston. This information will be used to see how prices change depending on the crime index of the neighborhood in which the property is located.

- Geojson.io: This website will be used to create the geojson file from scratch containing the map of the neighborhoods in Southwest Houston that I will use to locate the real estate properties.

- Foursquare API: Foursquare location database will give me a list of venues that will be use to explore the neighborhood for the property in interest.