

IBM Data Science Capstone Project- New Apartment

Andre Saito Guerreiro

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1 Introduction

1.1 Background

The pandemic has caused several changes to our society. One of the effects in the city of São Paulo was a sharp increase in the demand for rental properties. According to [1] during the third trimester of 2020, there was an 18% increase in the number of searches in a popular real state website compared to the same period in 2019. Article [2] states that the number of officialized real state transactions was 336.968, a 37% increase compared to 10 years prior.

One of the many people that moved during that period is my girlfriend. The sudden change to remote work and of her daily habits, along with a loss of income in her family influenced her choice of moving back to her parent household. However, now that the pandemic is (hopefully) nearing its end and the prospect of her job requiring her to return to her office, she is looking for a new place to live.

1.2 Problem

In this project, we intend to use the skills acquired in data scrapping, data wrangling, and machine learning to aid us in the search for a new apartment.

1.3 Data sources

In this project, we will use data from three different sources.

- The first and most import data comes from a popular real state website called "Quinto Andar". From this website, we obtain data on real state location, characteristics (number of bedrooms, parking space, etc), and total price.
- From Google we will obtain the information of the transit time required from each of the apartments to her workplace.

- From Foursquare we obtain data of the venues surrounding each of the apartments.

1.4 Methodology

After obtaining the real state data from Quinto Andar, we filter it according to her preferences. Secondly we calculate the transit time from each of the apartments to her workplace. This information is used to filter the apartments in which the transit time would be longer than 55 minutes. Finally, using Foursquare we analyse the venues surrounding each of the apartments. The goal here is to select the apartments in locations that are similar to places she has lived before and liked.

References

- [1] M. Schlindwein, “Efeito covid: aumenta a procura por aluguel de imóveis no país: Radar,” Nov 2020. [Online]. Available: <https://veja.abril.com.br/blog/radar/demanda-por-alugueis-em-alta-no-terceiro-trimestre/>
- [2] E. Veiga, “‘da cidade para praia’: os paulistanos que aproveitaram pandemia de covid para mudar de casa,” Jun 2021. [Online]. Available: <https://www.bbc.com/portuguese/brasil-57590323>