Choosing a Neighborhood for a New Pizza Place in Manaus

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1. Introduction

I want to start this text saying that English is not my first language, so maybe some typos and language problems in general may occur, but I will try my best to minimize this errors.

For my capstone project I decide to examine the city the I was born and lives till nowadays. Brazil is passing a big financial crisis and this scenario will probably not change since the actual government is taking decisions that are making this crisis even more larger.

With the number of unemployed persons rising, a option that a lot of them are taking is to create an own business. When walking through Manaus you can often see new small markets and restaurants, but with this large amount of business emerging is getting hard to choose the best neighborhood for a new one.

In this project, I will develop a model for helping a person to chosen the best neighborhood to install a new Pizza Place in Manaus. The best place can be choose based on the number of pizza places in the surroundings and the financial status of the neighborhood.

The rest of this report is as follow: on Section 2 I talk about the data that I used on this project, on Section 3 the methodology is presented, the results I got are on Section 4 and discussed on Section 5, finally on Section 6 I make a brief conclusion and point out some future works that can be done.

2. The Data

The data I used on this project was taken from three different sources, they are:

1. From Wikipedia[1] we got the name of Manaus' neighborhoods. Since pandas can get data directly from a URL I didn't need any other package to scrap this information from the website;
2. To get the latitude and longitude for every neighborhood I used the Geocoder[2] package. With this library we can easily get the latitude and longitude with only the names of the neighborhoods and the city;
3. Finally, to get the venues on these neighborhoods I used the Foursquare API[3] that based on a latitude and longitude can return a list of venues on a given radius.

[1]https://pt.wikipedia.org/wiki/Lista_de_bairros_de_Manaus
[2]https://geocoder.readthedocs.io/
[3]https://developer.foursquare.com/

3. **Methodology**
4. **Results**
5. **Discussion**
6. **Conclusion and Future Work**