

Best neighborhood to open a bakery in Recife

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December 13, 2019

Introduction

Recife is one of the most populous cities in Brazil. It has a population of 1,5 million [1] habitants and it's considered the center of economical development in the northeast region in Brazil. Year after year, more and more companies are created in the city and the entrepreneurship scenario in Recife is stronger than ever. From many possible ideas, a person could open a bakery specialized in sourdough bread.

The bread itself is one of the most consumed food items in Brazil. The average consumption per capita is around 22kg [2]. One of the trends is the demand for more artisanal breads and the sourdough bread is a good match in this way. But how to choose the best neighborhood to open the bakery?

Data

For this assignment, I used data from two main sources. The first one is the Brazilian Institute of Geography and Statistics. In their website is possible to get microdata about the last census in Recife. The data includes population and average income by neighborhood in Recife. Unfortunately, this data is not accessible directly to python and the author had to compile this data outside the main code and resume in a excel file.

The second source is the data portal of the city government of Recife [3]. It was possible to obtain a .geojson file with the geometry borders of each neighborhood and a list of every company located in the city, with their address.

The first thing to answer the question made in the Introduction is to find a way to see what is the competition in each neighborhood. With the competition know the offer, and with the assumption of constant per capita demand among the neighborhoods, we can see the locations with the lowest density of bakeries per habitants, which will have the higher demand in theory. Since it's cultural to buy bread from local stores, we can assume that this is the total demand.

Finally, from this list we can prioritize per neighborhoods with higher average income per capita due to the focus in a sourdough bakery, which is a trend from people with better economical conditions.