New Pharmachy Recommedation

1. DESCRIPTION OF THE PROBLEM

The Drogayl company wants to open one or more pharmacies in a city in the interior of southeastern Brazil. Due to logistical issues, the contractor requested a study to indicate in which neighborhood in the cities of Ribeirão Preto / SP or Uberlândia / MG the new pharmacy should be opened, considering population factors, existing pharmacies in these locations and customer satisfaction.

2. DISCUSSION OF THE BACKGROUND

If we were to consider only the number of pharmacies per inhabitant, the opening of a new unit in Brazil would not make sense. According to official government data, the country has a pharmacy for every 3300 inhabitants while the World Health Organization recommends one for every 8000. Despite this, the concentration of these businesses in certain locations in the city may open the opportunity in other regions where the density population justify. Other points to consider are: customer satisfaction with existing pharmacies, income and population growth in each city.

This work will recommend the best neighborhood of Ribeirão Preto or Uberlândia to open the new unit or demonstrate that these cities are not good places for that.

3. DATA COLLECTION

The data used in this project will be obtained through a demographic census file carried out in 2010 with the population of 14,227 neighborhoods in Brazil and Foursquare data for the location of these neighborhoods and the pharmacies in them. In addition, we will use the 2016 per capita income and a population growth factor (2020) to be applied according to the table below.

City	Per Capita Income	Population Growth Factor
Ribeirão Preto	51.759,84	1,21%
Uberlândia	48.585,36	15,74%

Population and location data will be used to indicate the number of pharmacies per inhabitant in each neighborhood in both cities and the level of customer satisfaction. With this we will be able to identify the neighborhoods with the greatest opportunity to receive a new pharmacy and compare the cities considering the per capita income of each one.