Abstract

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movie theater analysis and report

Data Science Capstone Project

**Introduction**

John is the COO Regal Cinemas and is tasked with analyzing locations for the next movie theater to be built. John must report his findings to the Board of Directors, therefore the Board is the audience and stakeholder of this data science report. John has narrowed down his options to Manhattan and Boston. John must analyze market saturation in these locations using Foursquare API and its data in order to determine if a new bakery will be a winning or losing venture. In order to perform the analysis of whether to build a new bakery in Manhattan vs Boston, dataframes will be created of these neighborhoods that include Foursquare API data included showing the existing number of bakeries in various distances from neighborhoods.

**Methodology**

In order to perform the analysis of whether to build a new bakery in Manhattan vs Boston, analysis must be performed of existing market conditions relevant to these two cities. Neighborhoods must be analyzed for penetration of movie theaters. This means foursquare API data must be used to show the numbers of movie theaters in a certain radius of latitude and longitude coordinates using the categoryID of movie theaters. John wants to present the location to the Board with the best opportunity to draw moviegoers, so he will choose the location with the fewest existing theaters.

**Results**

The outcome of the data analysis is that there are 5 existing movie theaters within 500 meters of central Manhattan, and 9 within one thousand meters. According to FourSquare, there are only 3 and 5 movie theaters in the same radius of central Boston.

**Discussion**

Given that the population density in nearly the same, it can be easily determined that John should present Boston as the next location for his Board of Directors to consider for building their next movie theater.

**Conclusion**

According to the data, Boston is a better location for building a new movie theater given that there are fewer of existing in a very dense population. Since Boston also has a stronger economy than Manhattan, it appears that this empirical data and its subsequent analysis should be sufficient to make a determination of this matter.