

Introduction/Business Problem

I have been approached by a friend of means who is looking to explore the possibility of chartering a specialty running store in the Pittsburgh, PA city limits. My friend is an avid runner, but has never been to Pittsburgh. He is relocating to the area to live closer to his wife's family, and as such, will be starting over fresh in a new city with this business venture. He has reached out to me, as I have lived in the city for a number of years and am also an active runner in the city and am well connected with many local running groups.

I latched onto this idea because, I have long believed that the city of Pittsburgh is unique in that running is extremely very popular and the geography of the region offers some of the most unique and exciting running routes in the country, but there are very few, if any, running supply stores specifically catered towards runners located in the city.

After discussing this further with my friend, I have learned that he envisions a store located close enough to some of the popular running areas within the city so that local groups can meet at the store before and after runs. The owner also wants the store to be a hub for competitive runners in the area and would like it to be accessible enough to draw in the college and young adult runners within the area. My friend pictures a store that focuses on high quality customer service to runners of all levels and abilities and will offer custom shoe fittings and will showcase all the latest running apparel technologies and advancements. My friend has emphasized to me that location of the store is the most important factor and I should begin my analysis with this in mind. He would like the store to be as near as possible to the "trendy" neighborhoods where runners live and work while still being accessible to the municipal parks and other popular civic accommodations.

After I have presented him with the optimal location for the store, I should then begin an assessment of the competition that the store would face within this chosen location. These two parts shall form the backbone of the data analysis conducted for my friend.

Data

From a data science perspective, this project will involve two parts. The first part shall be an analysis of location data using a database published by the Western Pennsylvania Regional Data Center. A GeoJson file of the parks and running trails within the city limits of Pittsburgh shall be analyzed in order to determine the optimal location for the running store as it relates to the criteria outlined by my friend who commissioned me for this study.

URL: http://pghqis-pittsburghpa.opendata.arcgis.com/datasets/e95593cb0a2d4ff194be9694b40614dc_0.geojson

This location analysis will be the primary that is used to locate the running apparel store. The output of this analysis shall be a proposed location (Latitude and Longitude) for the store so that it meets the criteria of my friend.

The second part of the analysis shall be an analysis of Foursquare API data to highlight key competitors or similar retail outlets located near the proposed store location (given the Latitude and Longitude of Part 1). This data analysis will focus on other popular stores of similar nature within a set distance from the store. The output of this analysis will be a list of a few "Top" competitors so that my friend can

conduct an analysis on how to differentiate his store from other existing stores in the area and how to focus is marketing campaign to fill gaps that these stores are leaving in the community.

All data shall be presented in a visual map form (if possible), and all other metrics from the data analysis shall be included in this report.

Discussion

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