WHERE DO WE GO?

Analysis of Dallas/Fort Worth Neighborhoods to Target Location of Catering Business

Coursera Data Science Specialization - Capstone Project

Battle of the Neighborhoods

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Introduction (A description of the problem and a discussion of the background)

Our hypothetical client is a Catering firm (FoodForAll, or FFA) looking to establish a location in the Dallas/Fort Worth (DFW) metroplex region in the northern part of Texas in the United States. The DFW region is a sprawling metropolitan area comprised of 2 major cities (Dallas and Fort Worth) and many smaller cities/communities. We will limit our analysis to the cities of the 2 major counties in the area, Tarrant County and Dallas County.

FFA is a startup catering company being created with the intent to serve primarily business functions and, to a lesser degree, residential clients. The client requests an analysis of the neighborhoods in the DFW area to help determine a location for their company location.

The primary factors for the analysis should include:

- Proximity to multiple businesses within a 5-20 mile radius of the selected location
- Lower number of nearby restaurants/other food service locations
- A secondary factor is the number of parks and community use areas nearby where residential customer parties could be catered

Methodology (A description of the data and how it will be used to solve the problem.)

Our methodology that we use in our analysis of the neighborhood data will include techniques learned in the Data Science specialization coursework.

We will be finding, querying and using the following data for this analysis:

- List of Zip codes for the communities in the Dallas/Fort Worth area (Tarrant County and Dallas County)
- Using Geocode to get the central latitude/longitude coordinates for the cities (by zip code) in the region
- Using the FourSquare API to explore the top features in each of the neighborhoods in the analysis zone. This API accepts latitude/longitude coordinates to specify a location to be analyzed. Features returned include a list of nearby businesses, parks, medical facilities and other amenities.

Our analytical approach will include segmentation analysis using K-means clustering, then evaluating the neighborhoods to present a ranking of the top candidate locations for their business