**Introduction/Business Problem:** The problem I have chosen for my data science project is to determine the best neighborhood in Philadelphia to open an Indian restaurant.

Background

Being home to universities such as University of Pennsylvania, Temple, and Drexel, several international students call Philadelphia their home. The largest ethnic minority of international students in Philadelphia are of Chinese and Indian descent. With a steady influx of international students in universities across Philadelphia, there is an obvious demand for quality restaurants to cater to these students, along with the city’s longtime residents.

Currently, Philadelphia has a few Indian restaurants scattered across various neighborhoods of the city. However, the general consensus on the quality and service of these restaurants is abysmal. Specifically, the following are some of the problems associated with Indian restaurants in the city:

* Quality of food: *lack of authentic Indian cuisine*
* Price ($$$): *unaffordable to students*
* Distance: *located away from public transportation*
* Ambience: *very messy to extremely lavish*

Therefore, the city is need of a quality affordable Indian restaurant with authentic cuisine having the ability to cater to students, city residents and tourists alike.

Audience

The idea described above will resonate with entrepreneurs and businesses who intend to serve quality authentic Indian food to the entire community of Philadelphia, focused specifically on the student population of the city.

Since one of the problems associated with the current Indian restaurants in Philadelphia is location, the solution of this data science problem will help potential stakeholders determine the ideal neighborhood to establish an Indian restaurant. Selecting the right neighborhood for a restaurant is as important as the price and quality of food. Choosing the right location provides a restaurant with a great opportunity to be successful having a steady inflow of customers throughout the year. With Philadelphia’s brutal winter, it becomes even more crucial to select a location that is convenient for people using different modes of transport.

**Data**

Following are the datasets that will be used to solve this problem:

1. Foursquare data (Venues, universities, public transport locations, surrounding business competition)

Foursquare location data will be used for the city of Philadelphia to obtain the following:

* Neighborhoods: an inventory of all the different neighborhoods in the city

Using Venues,

* Universities: an inventory of all the universities and their locations in the city
* Public transport locations: (if available) locations of all bus and train stops in the city
* Surrounding businesses: Locations of other Indian restaurants in each neighborhood along with their average rating and reviews

The above data will help better understand the different neighborhoods in Philadelphia. One or more of the above data elements may be used to better determine the ideal neighborhood for an Indian restaurant.

For example: Penn’s Landing in Philadelphia, being a tourist attraction, has a number of bus and train stops in its vicinity. However, due to it’s high real estate prices and lack of universities in the neighborhood, it may not be the best location to establish an Indian restaurant.

1. City demographics

The demographics of the city will help better understand the distribution of ethnicities across the various neighborhoods. This may help target certain neighborhoods containing a larger population of minorities. For example. North Central Philadelphia has a larger minority population in the neighborhood due to the presence of Temple University. This may serve as a good indicator to choose the neighborhood over other neighborhoods with lower diversity in ethnicities.

1. Real estate prices

The average real estate price helps determine the feasibility of establishing a restaurant in the neighborhood. The size of the restaurant is dependent on real estate prices particularly the average price per sq ft. within the neighborhood. For example. Fairmount in Philadelphia has an average price per sq ft. of $315[[1]](#footnote-1). This may be a feasible option compared to Penn’s Landing, the latter having a much higher average price per sq ft.

1. Crime rates by neighborhood

Philadelphia has a higher crime rate compared to other cities in the North East area. Therefore, it is critical for a commercial venture to have low incidents of crime in it’s neighborhood to attract more customers. For example. Bridesburg in Philadelphia has reported 34[[2]](#footnote-2) incidents of crime between Jan 22, 2020 to Feb 19, 2020. Therefore, it may not be the wisest decision to establish a restaurant in this neighborhood.

**NOTE:** The intention is to use all of the above cited data sources for the purposes of solving this problem. However, with the exception of Foursquare date, it is possible the other data sources may not be available in a format usable for analysis.

1. Source: <https://centercityteam.com/philadelphia-neighborhood/fairmount-art-museum-area/> [↑](#footnote-ref-1)
2. Source: <http://data.philly.com/philly/crime/?&nType=crime&dNeigh=Bridesburg> [↑](#footnote-ref-2)