**Predicting the Best Locations for a New Restaurant in the City of Detroit**

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1. Introduction  
   1. Background  
      The city of Detroit has for decades been an example of urban decay. Detroit is known as the Motor City because of the presence of many auto manufacturers, dating back Henry Ford and the advent of the assembly line. Behind this economic engine, Detroit rose to be one of the richest cities in the United States in the early 20th century. However, racial inequalities began to boil over in the civil rights era, spurring white flight to the suburbs which resulted in the decades long decline of the city. The population decline of the city has continued for decades, leading to high rates of crime, inequality, and poverty. All of this culminated in 2013 when Detroit became the largest city to ever declare bankruptcy.

Since the rock-bottom of bankruptcy, the city has begun to rebound. Current civic leadership and private investment have resulted in a renewed optimism in the city. In 2017, Detroit opened a new downtown sports arena for hockey and basketball. In 2018, a ground was broken for what will be the tallest building in Detroit when it is completed. Ford Motor Company bought the derelict Michigan Central Station, long the symbol of Detroit’s decline, and promised to restore the building as a beacon of the city’s turnaround. While these large scale projects are promising and give hope to Detroit’s return to prominence, on a smaller level, locals and others from out of town have been able to help aid the city’s recovery through investment of local businesses, including restaurants. Due to the low price of real estate and cost of living, many aspiring chefs have left places like New York City to open up their own restaurants in Detroit. This has resulted in an influx of young talent and Detroit has begun to be recognized as a great food city. However, restaurants are still seen as a risky business venture no matter the city. Therefore, being able to use available data to aid in where to open a new restaurant could mitigate some of this risk.

* 1. Problem  
     While someone may want to open or invest a new restaurant, factors such as crime or the presence and types of other restaurants for a given area may affect success of the new establishment. Therefore, purpose of this project is to use these data to predict the best locations to open a new restaurant in Detroit.
  2. Interest  
     Potential investors and restauranteurs would be interested in learning where to open a new establishment. Using publicly available data will aid in reducing the risk in opening a new restaurant while potentially maximizing potential returns as Detroit continues to recover.

1. Description of Data  
   1. City of Detroit Data  
      There is a multitude of data available from the city of Detroit via the city’s open data portal ([https://data.detroitmi.gov](https://data.detroitmi.gov/)). Datasets regarding crime from December 2016 through present available, which will be useful in determining the overall safety of an area. Sales of property through the 1970’s also exist as a dataset with almost a million transactions recorded. This could be useful in determining areas that would be affordable to buy a property, though we will limit analysis of this through December 2016 to match the crime dataset.
   2. Foursquare Data  
      Foursquare has a robust and large dataset that can be used to find the number and types of restaurants that already exist in an area. The analysis will seem to maximize areas that have some restaurant presence but not an oversaturated area.