# Opening a new restaurant in Seoul

Coursera Capstone Project

## Predicting optimal neighborhood to open new business

- Within the 25 districts of Seoul, the population of Seoul tends to flock toward trending and popular restaurants
- Although there are numerous factors in determining if a restaurant will be successful, *location* is one of the most important reasons in determining this

### Data acquisition and cleaning

- Using a Wikipedia article with the geographical locations of each of the districts, it was scrapped into a dataframe
- Using Foursquare API, the districts were highlighted within Seoul
- Within 2000 meters of each district the top 50 venues were chosen and divided by category

#### District Analysis

- Each district was grouped up by category
  - Using most popular cuisine, "Korean", a new dataframe was created to highlight frequency in each district
- Using K-Nearest Neighbor, districts were grouped into 5 different clusters to show prevalence of cuisine

#### Conclusion

- There are benefits and cons to opening a new business in each of the clusters
  - Choosing a populous area is vulnerable to more competition
  - Choosing a less populous area is susceptible to less possible revenue due to lack of popularity
- Downsides of using Foursquare API
  - Not as widely used in South Korea
  - Certain venues and categories excluded due to not being included