Start a new restaurant in the Madison area

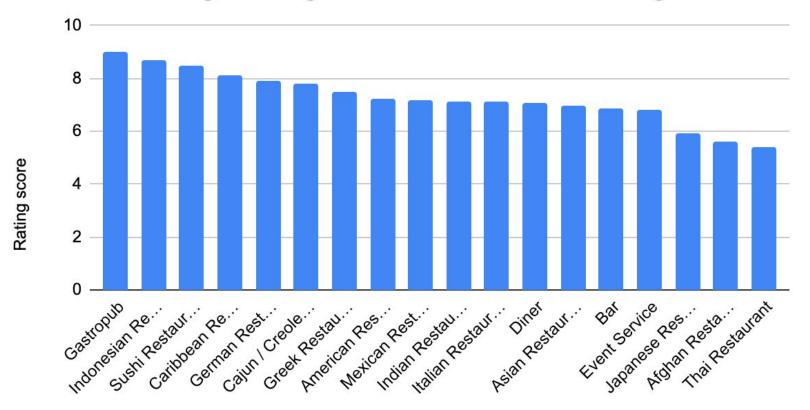
What kind of restaurant and where?

- Madison is the capital of Wisconsin, the base of science companies and campus of UW-Madison. Huge potential business for restaurants investors.
- But before starting a new restaurant, we need to define the restaurant and make decision about the location of the restaurant.
- Restaurant investors are very interested in this project which can give them recommendation based on the current restaurants information.

Data acquisition and cleaning

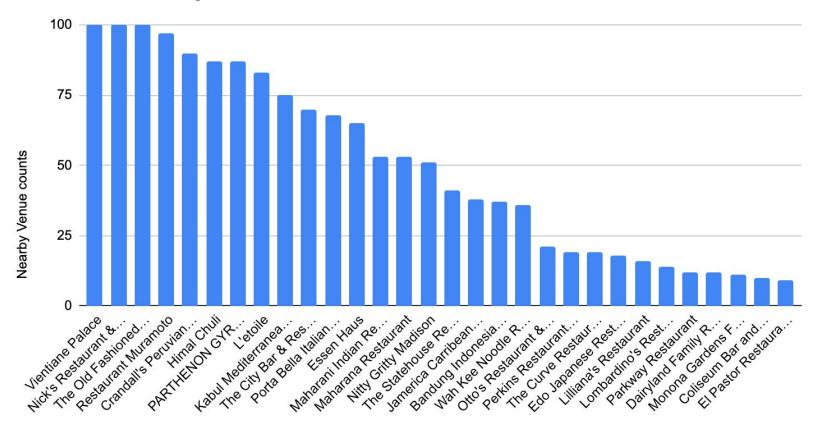
- The geographical coordinate of Restaurants in the Madison are obtained from Foursquare location database (https://foursquare.com/) through API.
- The rating scores and nearby venues of each restaurant were also downloaded from Foursquare location data.
- The restaurants which don't have rating scores or nearby venues were all excluded.

Result 1: Average Rating Scores of Restaurant Categories

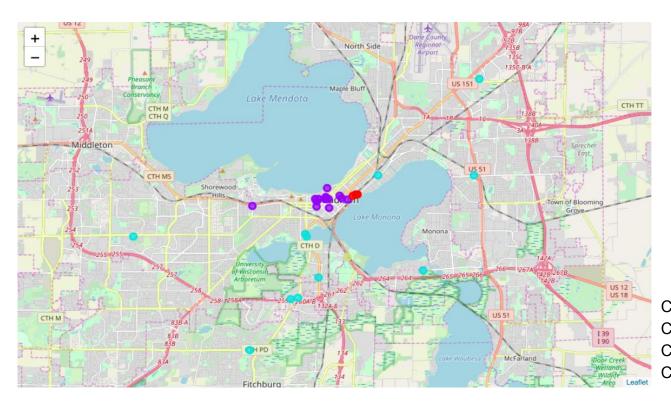


Restaurant Category

RESULT 2: Nearby Venue counts

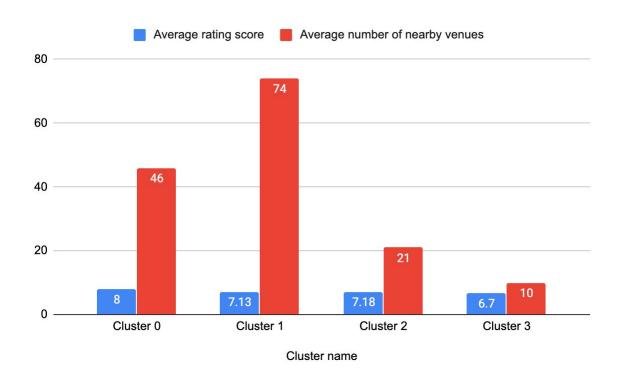


Result 3: Clusters on Map



Cluster0: red; Cluster1: purple; Cluster2: blue, Cluster3: green

Result 4 Average rating score and average nearby venues couts of Clusters



Conclusion

- Restaurant type: Investor can start a restaurant from either one from Gastropub, Indonesian or Sushi restaurants, since they are the 3 top ranking restaurant based on the Result 1
- **Location**: Cluster 0 and Cluster 1 will be the recommended locations for the new restaurant. If investors prefer getting high score, they might choose start it at the Cluster 0 area; if investor expect more potential customers, they could choose Cluster 1.