

Proposal for Foundation Project of Applied Data of Science
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TOPIC: Prediction of yelp rating of a new restaurant

My team intend to setup a project about building a model to predict a new restaurant's rating in yelp. We hope the project could be meaningful in real life. The restaurant's rating in yelp could represent the popular level of the restaurant to some extent, so the ratings have a close relationship with the interest of a restaurant or investors' interest. We assume the model is built for investors who intend to invest a new restaurant. Through the model, by the input as the type of the restaurant, the proposed average spend and the location, the model will output the predicted rating of the restaurant. Then the investors could make the decision based on the prediction.

We suppose to set 3 variables for building the model by now. The first one is the proposed average spend. The second one is the income of the neighborhood. The third one is the quantity of restaurants in same category and in same neighborhood.

The main method we would use is multiple-regression. The data sources are Yelp dataset and U.S. census dataset. The process map of our proposed model is below.

