

Project Goals and Importance

The primary goal of our project is to leverage Yelp's extensive dataset to develop a predictive model that accurately identifies and quantifies the factors contributing to the success of businesses. Specifically, we aim to:

1. **Identify Key Success Factors:** Analyze historical data from Yelp to pinpoint the critical factors that influence business success. This involves examining attributes such as location, customer reviews, operational hours, and business amenities.
2. **Predict Business Success:** Use the identified factors to predict the success of a business in a particular location. Success will be quantitatively measured using indicators like the business's star rating, review count, and operational status.

Ethical Considerations

Addressing Bias and Ensuring Fairness

To address potential biases inherent in Yelp's dataset, which may reflect socio-economic, geographical, or categorical biases, we implemented several targeted statistical methods and algorithms:

- **Stratified Sampling:** Ensured proportional representation across various categories to prevent biases related to over or underrepresentation.
- **Feature Normalization:** Applied normalization techniques to prevent features with larger ranges from disproportionately influencing the model.