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1. Research Question:

How do online reviews and ratings impact the popularity and profitability of restaurants, and what factors contribute to positive or negative reviews?

2. Justification:

Understanding the influence of online reviews and ratings on restaurant success is crucial for restaurant owners seeking to attract customers and improve their business performance. By analyzing the relationship between online reviews, ratings, and various restaurant attributes, we can provide valuable insights to help restaurants enhance their reputation and profitability in the competitive market.

3. Data Sources/How We Will Collect Info:

We will collect data from popular online review platforms such as Yelp or Google Reviews, which provide comprehensive information on restaurant ratings, reviews, and attributes. Additionally, we will utilize publicly available datasets on restaurant demographics, location, and menu offerings to enrich our analysis.

Gather online review data from Yelp or Google Reviews API, as well as supplementary datasets on restaurant attributes. Clean and preprocess the datasets to handle missing values, outliers, and inconsistencies. Merge datasets to create a comprehensive dataset for analysis.

Explore the distribution of restaurant ratings and reviews, as well as correlations with demographic and geographic factors. Identify key features that contribute to positive or negative reviews. Conduct sentiment analysis on review text to classify reviews as positive, neutral, or negative. Analyze sentiment trends and their impact on restaurant popularity. Perform statistical tests to determine the significance of relationships between online reviews, ratings, and restaurant attributes. Also we will create visualizations (charts, graphs) to illustrate key findings and insights from the analysis.

Potential Challenges:

Obtaining comprehensive and reliable online review data

Addressing biases in online reviews and ratings

Identifying actionable insights from the analysis that can be implemented by restaurants

Conclusion:

This project aims to investigate the impact of online reviews and ratings on restaurant popularity and profitability, as well as the factors influencing review sentiment. By leveraging data-driven

analysis techniques, we can offer valuable recommendations to help restaurants enhance their online reputation and attract more customers in today's digital age.