The Impact of Tourism and Urban Hospitality on Restaurant Ratings

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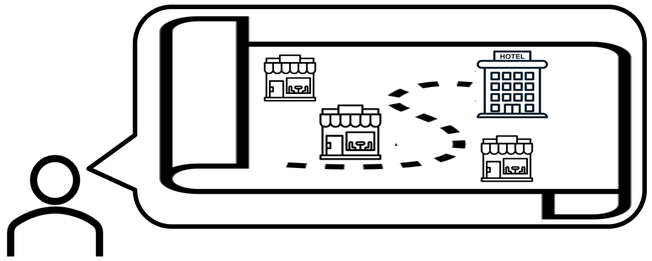
Introduction

This study examines how the proximity of restaurants to rental properties and hotels affects tourist reviews and star ratings on Yelp. Understanding these dynamics can help optimize location-based strategies to enhance customer satisfaction and inform operational decisions, contributing to the field of spatial business analytics.

Business Question

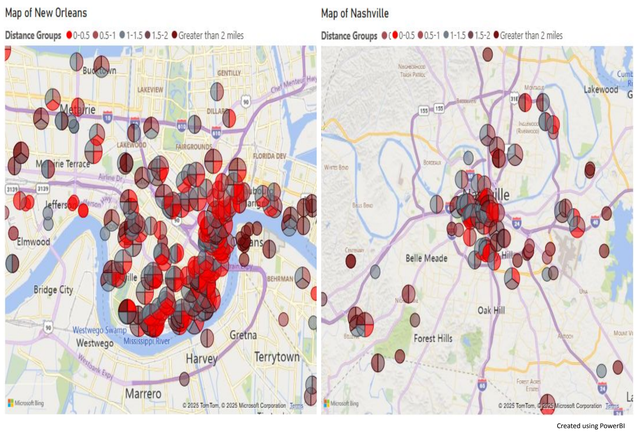
How does proximity to hotels and vacation rentals affect Yelp restaurant reviews, including star ratings, review counts, and customer sentiment in urban tourist areas?



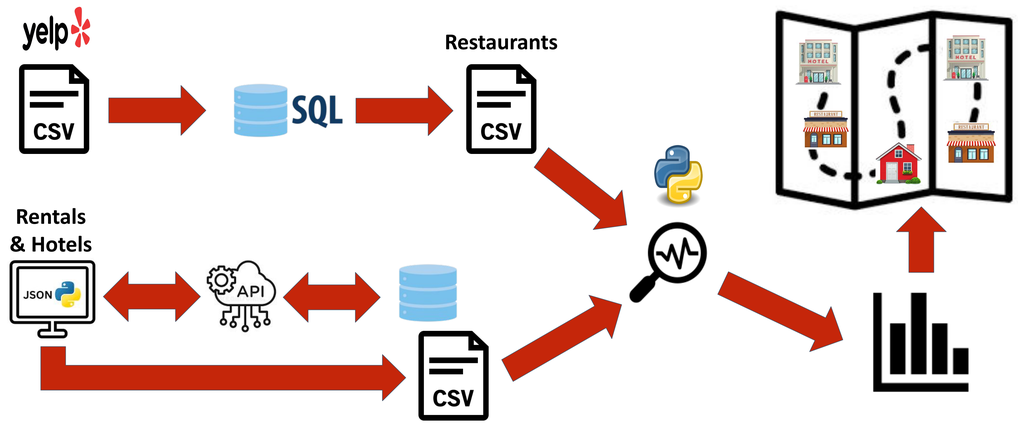
Hypotheses

Restaurants near hotels and vacation rentals in urban tourist areas tend to have higher review counts but lower median star ratings and more mixed customer feedback than those located farther away.

Geospatial Maps



Methods



Statistics

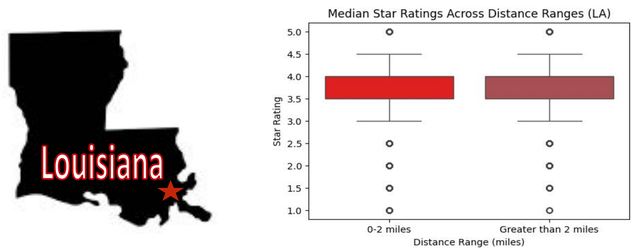
New Orleans, LA				
Analysis	Test Type	Statistic	Effect Size	p-value
Median Star Rank	Kruskal-Wallis	19.60	0.0035	0.0006**
Mean Review Count	ANOVA	3.160	0.0032	0.0133**

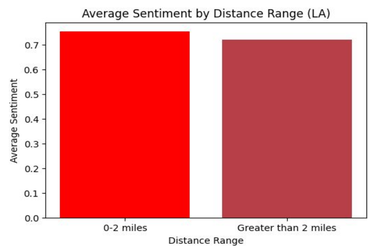
** Statistical Significance at 0.01

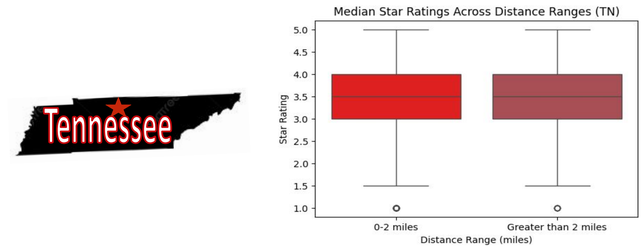
Nashville, TN				
Analysis	Test Type	Statistic	Effect Size	p-value
Median Star Rank	Kruskal-Wallis	17.50	0.0213	0.0016**
Mean Review Count	ANOVA	2.364	0.0147	0.0518*

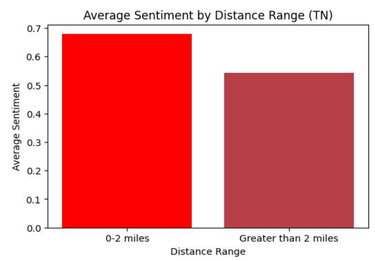
* Statistical Significance at 0.05

Visualizations









Findings Summary

There are significant differences in stars and review counts across distances, with stronger effects in TN.
Visuals show trend for higher ratings and sentiment in restaurants closer to the lodgings, declining as distance increases.
Maps highlight dense clustering of lodgings and distance to restaurants.

Sentiment Analysis

New Orleans, LA

Customer Experience: "service," and "staff"

Repeat Visits: "come back" and "recommend"

Nashville, TN

Visits: "first time", “come back”

Popular dishes: "pancake”, “potato pancakes”, “chicken”, and “sweet potato”

Insights/Recommendations

Business Insights:	Business Recommendations:
Strategic location selection	Enhance search filters for proximity
Exceptional customer service	Customer review insights tool
Targeted menu optimization	Establish location-based marketing partnerships

Future Applications

Cloud Migration: Migrate the project to the cloud to handle larger datasets with scalable storage and faster computations.

Improved Sentiment Analysis: Enhance sentiment analysis by incorporating advanced machine learning models like deep learning and NLP algorithms.

Incorporate price ranges of the restaurants, customer segmentation, recommendation system

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