

# Summary Of This Project

The document presents a data-driven analysis of restaurant success using Yelp data, focusing on the role of user engagement (reviews, tips, check-ins) in influencing business outcomes. It explores correlations between engagement metrics and success indicators like review count and average star rating. The findings suggest that while higher ratings don't always equate to more reviews, engagement across platforms is interlinked: restaurants with more reviews often have more check-ins and tips. A notable observation is that restaurants rated around 4 stars show the highest engagement, whereas a slight drop is seen at the perfect 5-star level, possibly due to fewer customers feeling the need to add reviews or a more selective clientele. Sentiment analysis also shows that reviews marked as useful, funny, and cool positively correlate with restaurant success.

The analysis further breaks down engagement by geography and time trends. Cities like Philadelphia and Tampa show the highest restaurant success scores, while elite Yelp users—though few in number—contribute significantly to overall reviews, making them influential stakeholders. Time-based trends reveal engagement peaks in evening hours (4 pm to 1 am) and during colder months (November to March), indicating seasonality in dining behaviours. COVID-19 caused a notable dip in engagement, but high rated restaurants generally sustained or increased activity over time. The report concludes with strategic recommendations for boosting restaurant success, such as leveraging elite users, optimizing service during peak hours, and investing in cities with high engagement and ratings.