

Analysis and Findings

Out of 150k businesses, 35k are restaurants business and are open.

Table showing distribution of business success metrics (review count and average rating):

average_review_count	104.097789
min_review_count	5.000000
max_review_count	7568.000000
median_review_count	15.000000
average_star_rating	3.523969
min_star_rating	1.000000
max_star_rating	5.000000
median_star_rating	3.500000

Highest Rating

	name	review_count	avg_rating
	ā café	48	5.0
	two birds cafe	77	5.0
	the brewers cabinet production	13	5.0
	taqueria la cañada	17	5.0
	la bamba	44	5.0
	la 5th av tacos	24	5.0
	el sabor mexican and chinese food	21	5.0
	eat.drink.Om...YOGA CAFE	7	5.0
	d4 Tabletop Gaming Cafe	8	5.0
	cabbage vegetarian cafe	12	5.0

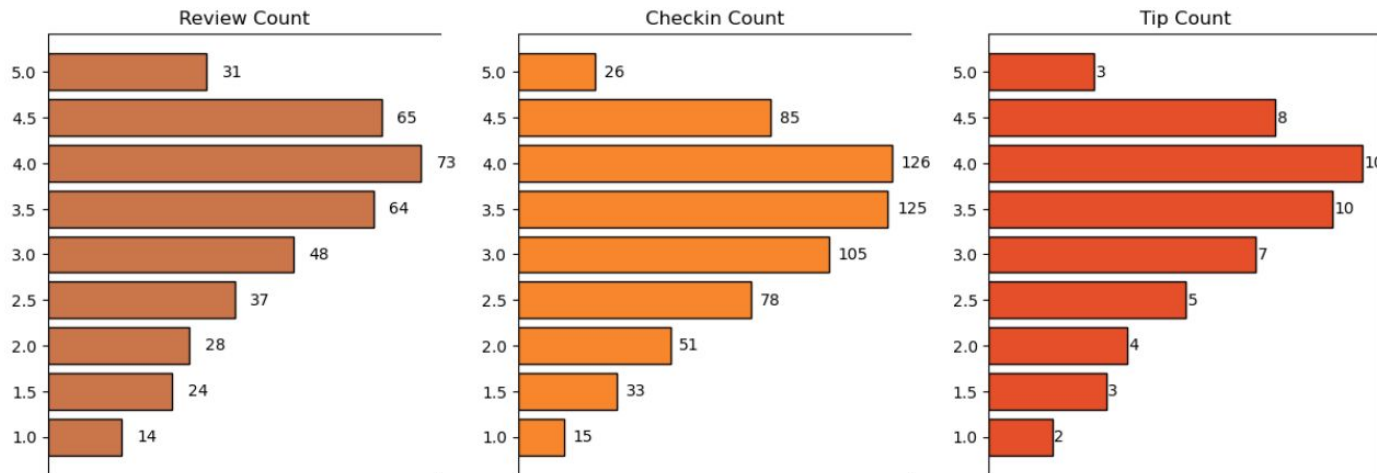
Highest Review Count

	name	review_count	avg_rating
0	McDonald's	16490	1.868702
1	Chipotle Mexican Grill	9071	2.381757
2	Taco Bell	8017	2.141813
3	Chick-fil-A	7687	3.377419
4	First Watch	6761	3.875000
5	Panera Bread	6613	2.661905
6	Buffalo Wild Wings	6483	2.344828
7	Domino's Pizza	6091	2.290210
8	Wendy's	5930	2.030159
9	Chili's	5744	2.514706

- Higher ratings do not guarantee a higher review count, or vice versa.
- Success of restaurants is not solely determined by rating or review counts.
- Review count reflects user engagement but not necessarily overall customer satisfaction or business performance.

Do restaurants with higher engagement tend to have higher ratings?

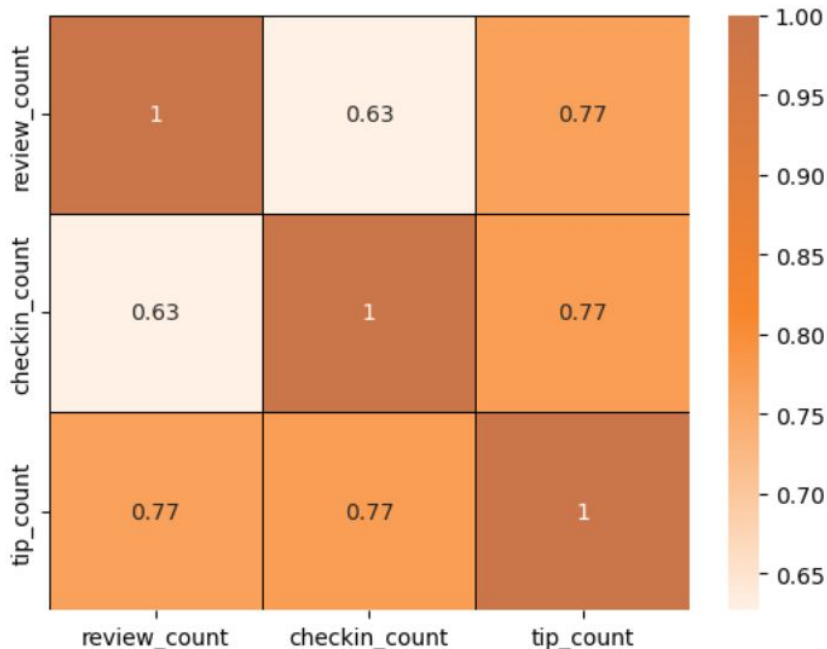
- Data shows a general purpose increase in average review, check-in and tip counts as ratings improve from 1 to 4 stars.
- Restaurants rated 4 stars exhibit the highest engagement and shows a downward trend for rating above 4.
- The drop in engagement at 5.0 stars might suggest either a saturation point where fewer customers feel compelled to add their reviews or a selectively where only a small, satisfied audience frequents these establishments.



Is there a correlation between the number of reviews, tips and check-ins for a business?

These correlations suggest that user engagement across different platforms (reviews, tips and check-ins) is interlinked; higher activity in one area tends to be associated with higher activity in others.

Business should focus on strategies that boost all types of user engagement, as increases in one type of engagement are likely to drive increases in others, enhancing overall visibility and interaction with customers.



Is there a difference in the user engagement between high-rated and low-rated businesses?

Data indicates a clear correlation between higher ratings and increased user engagement across reviews, tips and check-ins.

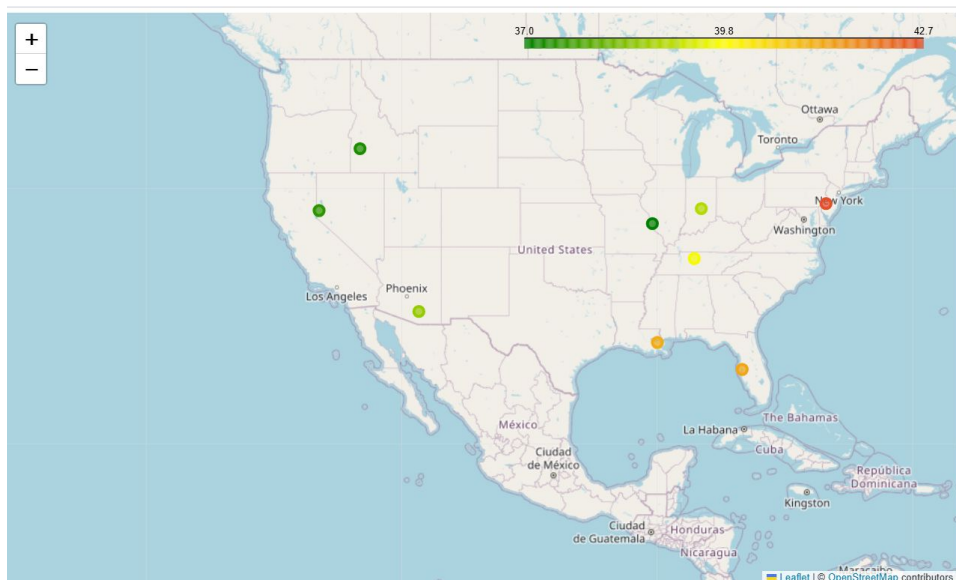
This pattern underscores the importance of maintaining high service and quality standards as these appear to drive more reviews, check-ins and tips, which are critical metrics of customer engagement and satisfaction.

	review_count	tip_count	checkin_count
category			
High-Rated	72.291062	10.162766	122.066641
Low-Rated	42.123420	6.541689	88.880828

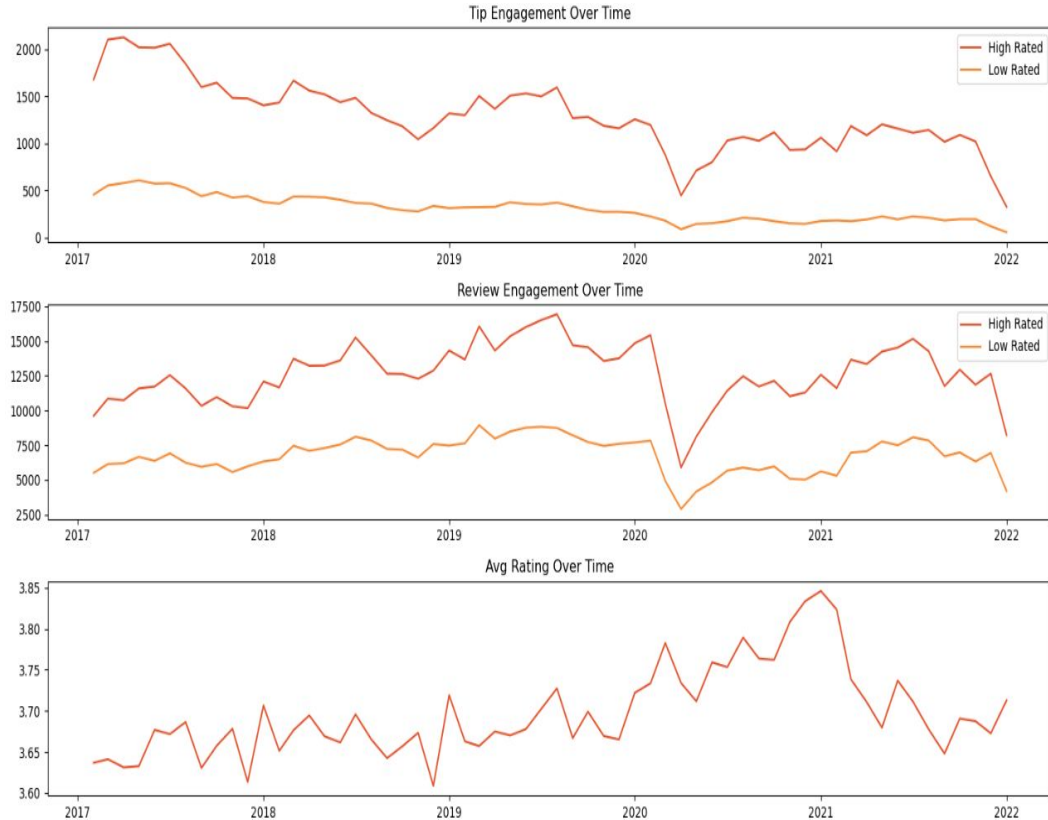
How do success metrics of restaurants vary across different states and cities?

Philadelphia emerges as the top city with the highest success score, indicating a combination of high ratings and active user engagement.

Following Philadelphia, Tampa, Indianapolis and Tucson rank among the top cities with significant success scores, suggesting thriving restaurant scenes in these areas.



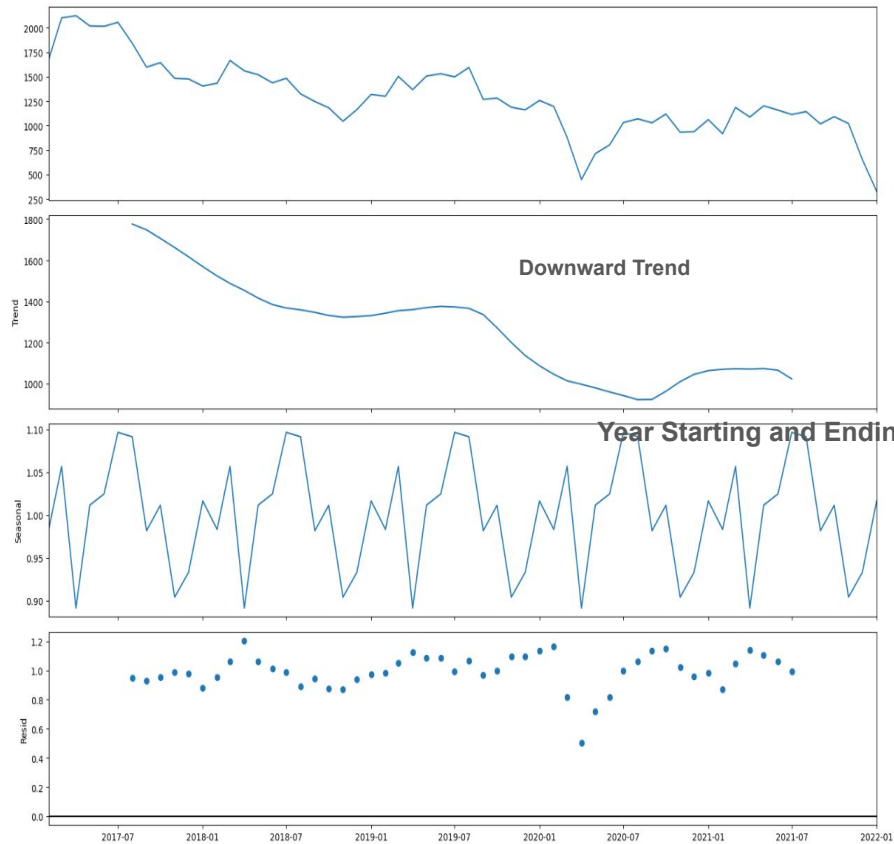
Are there any patterns in user engagement over time for successful businesses compared to less successful ones?



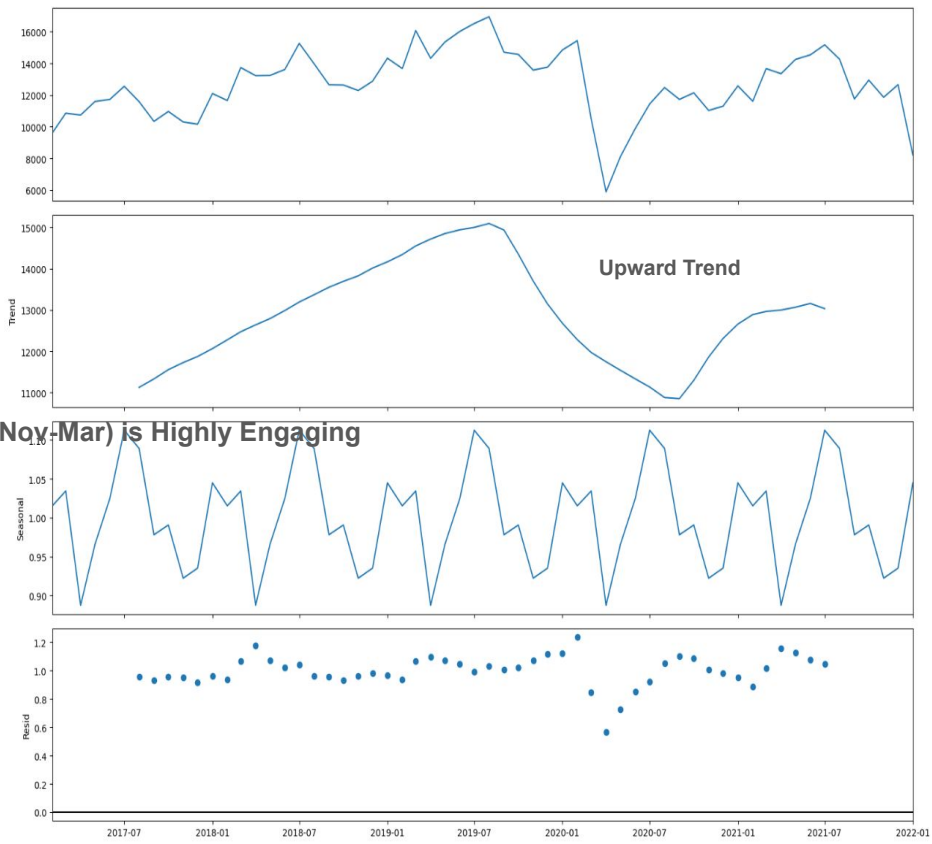
- Successful businesses particularly those with higher ratings (above 3.5), exhibit consistent and possibly increasing user engagement over time.
- High rated restaurants maintain a steady or growing level of user engagement over time, reflecting growing customer interest and satisfaction.

Trend and seasonality analysis

Tip Count

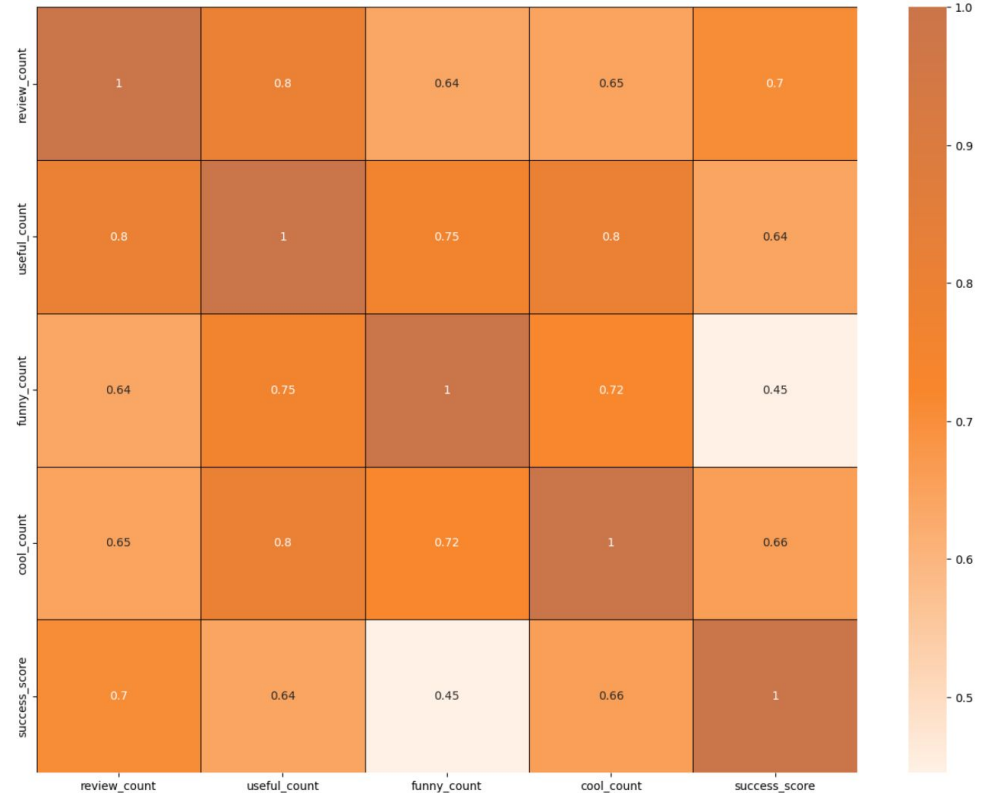


Review Count



How does the sentiment of reviews and tips (useful, funny, cool) correlate with the success metrics of restaurants?

- 'Useful', 'funny' and 'cool' are attributes associated with user reviews. They represent the feedback provided by users about the usefulness, humor or coolness of a particular review.
- Higher counts of useful, funny and cool reviews suggest greater user engagement and satisfaction, which are key factors contributing to a restaurant's success

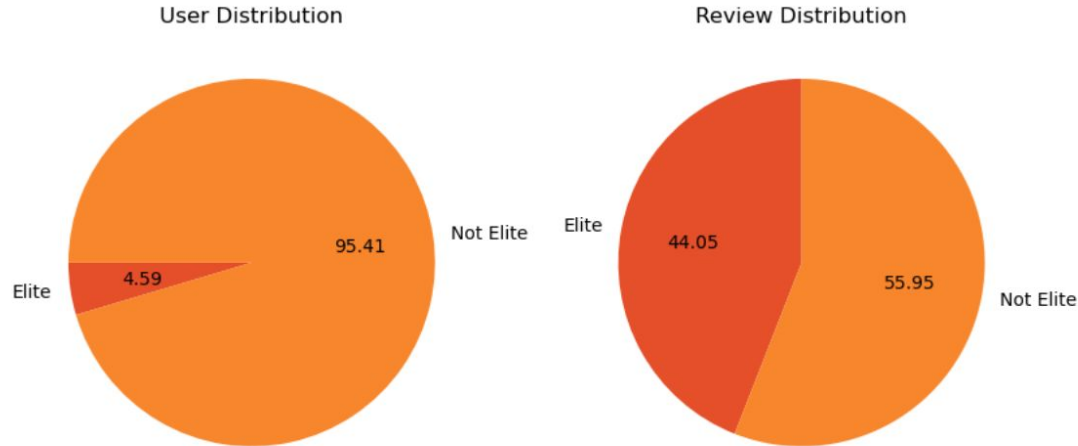


Is there any difference in engagement of elite users and non elite users?

Elite users are individuals who have been recognized and awarded the 'Elite' status by yelp for their active and high-quality contributions.

Elite users, despite being significantly fewer in number, contribute a substantial proportion of the total review count compared to non-elite users.

Establishing a positive relationship with elite users can lead to repeat visits and loyalty, as they are more likely to continue supporting businesses they have had good experiences with.



Recommendations

Utilizing insights from the analysis of various metrics such as user engagement, sentiment of reviews and the impact of elite users, businesses can make informed decisions to drive success.

Collaborating with elite users and leveraging their influence can amplify promotional efforts, increase brand awareness and drive customer acquisition.

Businesses can adjust their operating hours or introduce special promotions to capitalize on the increased demand during peak hours.

Less successful businesses may need to focus on strategies to enhance user engagement over time, such as improving service quality, responding to customer feedback.

Cities with high success scores presents opportunities for restaurant chains to expand or invest further.

Recommendations