How Zomato Decides Which Restaurants to Show First?

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Abstract

Online food delivery platforms like Zomato rely on ranking algorithms to prioritize restaurants, influencing user choices and restaurant visibility. This study investigates Zomato's ranking mechanism by analyzing data collected over three days at three-hour intervals (10:00 AM to 10:00 PM) using filters such as relevance with delivery time (under 30 minutes), ratings (3.5+ and 4.0+), promotions (buy-one-get-one, deals), and price ranges (under Rs. 250, Rs. 250-350, above Rs. 350). Using Excel, numpy, pandas, EDA, Matplotlib and seaborn for data analysis and visualization, we identify key factors like ratings, promotions, and pricing affecting restaurant prioritization. Findings suggest relevance sorting favors high-rated restaurants with active deals, with price and delivery filters introducing biases. This research offers insights into algorithmic transparency and optimization for stakeholders.

Introduction

The rise of online food delivery platforms like Zomato has transformed dining, with restaurant ranking algorithms shaping user decisions and restaurant revenues. Understanding how Zomato prioritizes restaurants is critical for assessing consumer choice and market fairness. Prior studies have explored recommendation systems, personalization, and fairness in food delivery platforms, highlighting factors like user preferences, ratings, and multi objective optimization.

However, empirical analysis of live ranking behavior under diverse filters remains limited. This study examines Zomato's ranking by collecting data across multiple filters over three days, using Excel and Power BI for analysis. We aim to identify key ranking factors, assess consistency, and discuss implications for transparency and optimization. The paper is structured as follows: Literature, methodology, results, discussion, and conclusion.

Literature Survey

The ranking of restaurants on online food delivery platforms has been studied primarily from the perspectives of consumer choice, platform economics, and algorithmic design. Researchers have shown that ranking order strongly affects visibility and conversion, often leading to a "rich-get-richer" effect where popular restaurants maintain dominance [1]. Studies on recommender systems in e-commerce emphasize the importance of balancing personalization with fairness so that both new and established sellers gain exposure [2]. In the context of food delivery, platform-driven features such as delivery time, discounts, and customer ratings act as major determinants of restaurant placement [3]. A study in Applied Sciences highlights how dynamic consumer demand patterns require ranking systems to

adapt in real time [4]. Similarly, research on digital marketplaces indicates that promotional strategies such as "Buy 1 Get 1" or "Deals of the Day" significantly influence visibility and customer engagement [5]. Past works also point to the role of pricing in shaping online visibility, where affordability tiers (low, medium, high) influence ranking alongside customer preferences [6].

This body of literature collectively emphasizes that ranking systems on platforms like Zomato are not purely algorithmic but are shaped by a blend of consumer demand, economic incentives, and contextual filters. Our study extends these insights by examining real-time Zomato data across multiple conditions, analyzing how rankings shift with respect to ratings, pricing, and promotions.
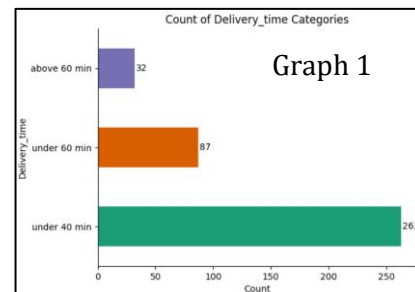
Tools/Methodology

Tools - The <u>Zomato</u> Android app facilitated data collection, <u>MS Excel</u> was used for data organization, and Excel, numpy, pandas, EDA, Matplotlib and seaborn enabled interactive visualization of restaurant ranking patterns.

Methods – Data was collected using eight Zomato filters—relevance sorting combined with delivery time under 30 minutes, ratings of 3.5+ and 4.0+, buy-one-get-one offers, deals of the day, and price ranges under Rs. 250, Rs. 250-350, and above Rs. 350—to analyse restaurant prioritization.

Results/Discussions

The graph 1 shows that most deliveries (263) are completed within 40 minutes, while only a few (32) take more than an hour.
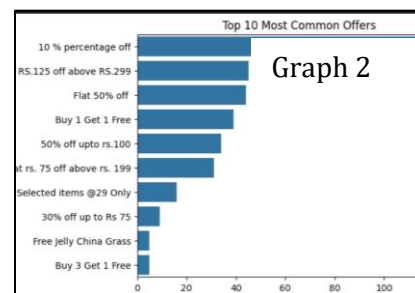
⚡ Impact on ranking: Restaurants with faster delivery times are ranked higher on Zomato, as speed directly improves customer satisfaction and order likelihood. 🚀

The graph 2 shows the top 10 most common offers on Zomato. The most frequent is 10% off, followed by flat ₹125 off above ₹299 and flat 50% off. Offers like Buy 1 Get 1 Free and discounts on specific amounts are also popular, while niche offers (like free jelly) are rare.
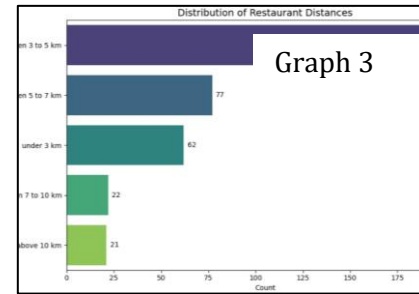
⚡ Impact on restaurant ranking:

Restaurants with attractive and frequent offers (like 10%–50% off or BOGO deals) are pushed higher in listings

because they attract more clicks, higher conversions, and repeat orders. Simply put: better offers = better visibility & higher ranking.
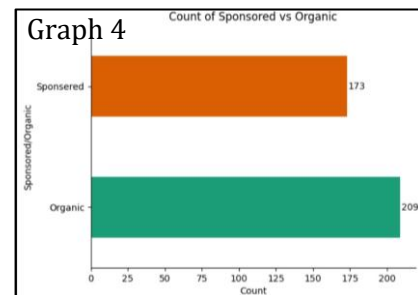
From Graph 3 we can observe, Most restaurants (200) are located within 3–5 km, while very few (43) are beyond 7 km.

⚡ Impact on ranking: Restaurants closer to the customer (under 5 km) are ranked higher on Zomato since they ensure faster delivery and better customer experience, while distant ones appear lower unless highly rated or promoted.
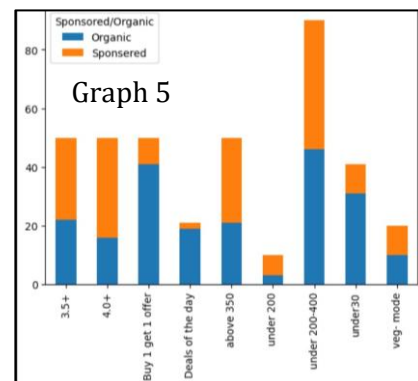

Graph 3

The graph 4 shows 209 organic restaurants vs. 173 sponsored ones.

⚡ Impact on ranking: While organic restaurants rely on ratings, delivery speed, and offers to appear higher, sponsored restaurants get priority placement because they pay for visibility, often appearing at the top regardless of performance.
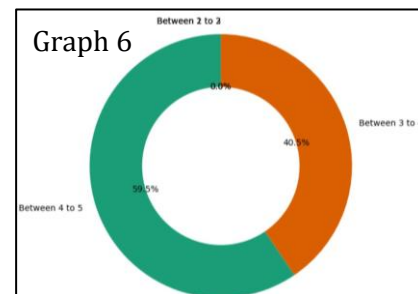

Graph 4

The graph 5 shows restaurant filters split by organic vs. sponsored listings. Most visibility comes from filters like under ₹200–400, ratings (3.5+/4+), and offers (BOGO, deals of the day), with a big share boosted by sponsorship.

⚡ Impact on ranking: Sponsored restaurants get priority placement in these popular filters, while organic ones depend on ratings, pricing, and offers to appear higher.

Graph 5

The graph 6 shows that 59.5% restaurants have ratings between 4–5, while 40.5% fall between 3–4. None are below 3.

⚡ Impact on ranking: Higher-rated restaurants (closer to 5) are ranked higher on Zomato's list since ratings directly reflect customer trust, quality, and satisfaction. Lower-rated ones appear further down unless they are sponsored.

Graph 6

Conclusion

Zomato's ranking system is largely influenced by delivery time, customer ratings, promotions, and restaurant distance. Sponsored restaurants enjoy priority visibility, often appearing higher regardless of organic performance. High-rated outlets with active deals consistently dominate the top results, while faster delivery and proximity further strengthen their position. For consumers, this means the listings they see are shaped not only by relevance but also by platform-driven biases. For restaurants, maintaining strong ratings, offering attractive deals, and investing in sponsorships are key to improving visibility. Overall, the ranking reflects a balance between consumer preferences and economic incentives. These insights highlight the need for greater algorithmic transparency to ensure fair exposure. Future research could expand on these findings by studying personalization effects and comparing across multiple platforms.

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