

Report

Deliverables

- ☒ ~~Decomposition or a detailed plan of their analysis and ideas for a dashboard.~~
- ☐ A dashboard as the final product of your research and a report that includes the findings done during your analysis.

Assumptions

1. The INR to USD conversion rate was calculated according to the January 15, 2024 Google conversion rate, at ₹82.33 (Indian rupee) to \$1 (USD).
2. The following conclusions were based solely on Zomato data collected from the provided datasets, covering the time span from January 2018 to June 2020.
3. All tables were joined on an “inner” join ; If common information could not be found between the two tables, then it was dropped for the analysis.
4. Data from January 2018 was dropped when calculating overall average performance by month and weekday, to avoid skewing results.

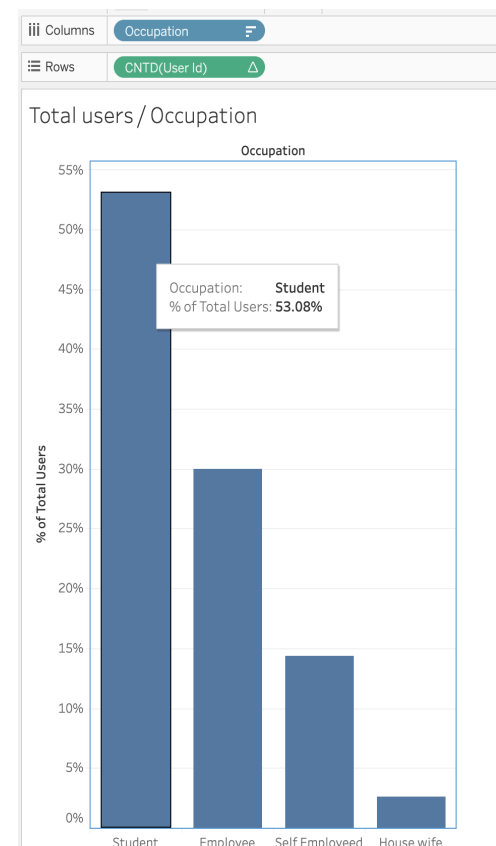
Who are Zomato customers?

Age - About 90% of all Zomato users were in their 20's.

Gender - Male Zomato users outnumbered female Zomato users by about 14%. Males generated about 10% more revenue towards total Zomato sales than females.

Occupation/Income - About 53% of all Zomato users were students. About 44% were employed in some way (30% Employees, 14% Self-Employed). Interestingly, about 48% of all Zomato users reported No Income. However, 95% of those users also identified as students.

Education Qualifications - 91% of all Zomato users reported having Graduate or Post Graduate level educational qualifications. As almost half of all Zomato users also reported being students, it would be interesting to find out more about how our employed users found out about /or started using the app. It's possible they first started using Zomato as students too.



It was also interesting to note that while Graduate users slightly outnumbered Post Graduate users (in both total unique Zomato users and total overall quantity of sales), Post Graduate users still contributed more overall sales revenue by about 3%.

Family Sizes - The reported family sizes of Zomato users were fairly spread out. 30% reported families of 3, 26% families of 2, 16% families of 4, 14% families of 5, 7% families of 6, and 6% families of 1.

Interestingly, average sales quantity didn't change much by family size. It's possible that users are not ordering for their families.

What is their purchasing behavior?

Time

Years - Total number of active users correlated positively with total sales (₹) from 2017 to 2020. There was a significant peak in both total sales and total users in 2018, with sales increasing by almost 41% from the previous year. Both metrics declined in 2019, with total sales decreasing by 9%. Declines were even more significant in 2020, with sales decreasing by almost an additional 41%. Perhaps due to the pandemic?

Months - One period that stood out was the period between December 2017 to January 2018. There was a significant jump in sales at this point (by almost 11%).

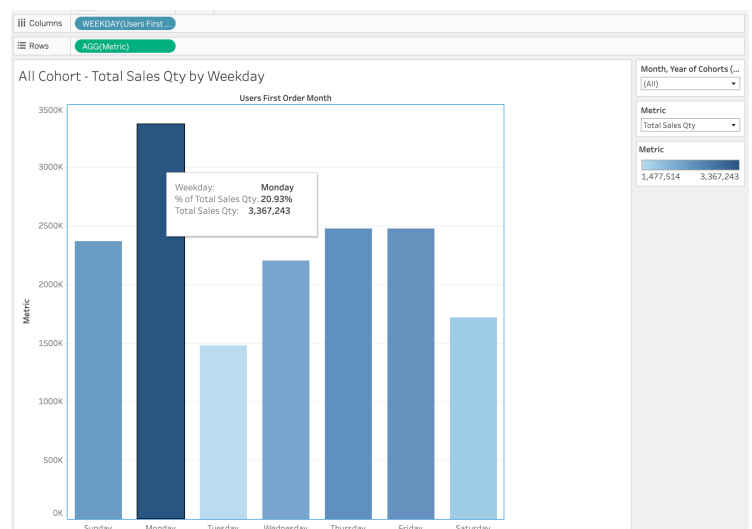
It would be good to review what was happening with Zomato during this time period. Something was working exceptionally well for us in terms of sales. Perhaps Zomato was experimenting with a new marketing or advertising initiative that was working exceptionally well with our users?

With the exception of this time interval, the months of July, December and February averaged highest sales, respectively.

Weekdays - Overall, users tended to be most active on Mondays, averaging both highest sales and highest sales quantity.

Location

Cities - Almost 64% of all total revenue came from restaurants in Ahmedabad.



Neighborhoods/Localities - Neighborhoods/localities contributing the greatest overall total revenue included Navrangpura (about 17%), Ghatlodia (14%), Vastrapur (14%), GOTA (about 11%), Chandkheda (10%), Bopal (about 10%), Gandhinagar (about 9%), and Maninagar (about 4%); all located in the city of Ahmedabad.

Food

Veg vs. Non-veg - About 75% of all orders placed were for Veg dishes.

Cuisine - North Indian was the most popular type of cuisine, generating about 21% of all revenue. Indian food came second at about 16%. Chinese (9%), Pizzas (7%) and Fast Food (5%) followed.

Food Category - Chinese food was the most popular sub-category in multiple types of Cuisines, particularly in Indian (7%) and North Indian (7%). Chinese food of some kind made up about 19% of all total orders.

User Cohort Analysis (by month of first order date)

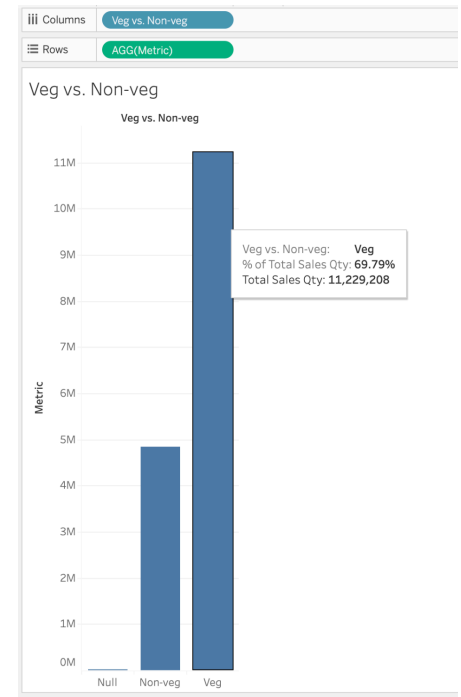
Active User Retention

How have the number of active paying users changed from month to month? - The number of active customers within all cohorts decreased markedly after their first order month. Most cohorts ultimately struggled to reach one percent of active users in any of the months following the first order month. The few cohorts that did reach above 1% at some point, rarely maintained that gain in subsequent months.

Revenue by Cohort

What is the average revenue from month to month for active users? - As might be expected based on very low customer retention rates, average revenue per cohort also decreased markedly after the first order month.

As a whole, the cohorts averaged below half a percent of original revenue by the second month and this value just continued to decrease over time.



I Columns			Elapsed Months			II Columns			Elapsed Months																								
Rows			MONTHS/Cohorts (by...																														
Cohort Revenue (retention)																																	
			Elapsed Months																														
View of Cohorts (first order month)			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Oct 17	100.00%						0.31%					0.25%	0.10%			0.22%	0.65%					1.59%			0.28%					0.11%	0.17%		0.30%
Nov 17	100.00%	0.01%		9.23%	0.74%	0.02%	0.37%	0.83%				0.87%			0.05%	0.73%				0.01%	0.02%	0.02%			0.31%	1.53%	0.02%	0.07%		0.08%	0.07%		
Dec 17	100.00%	2.16%			0.24%		0.77%						0.87%	0.42%	0.04%	0.04%				1.28%	0.04%		0.09%		0.22%	0.01%		0.02%		0.07%		0.25%	
Jan 18	100.00%		0.38%		0.16%	0.04%		0.13%	0.70%	0.09%	0.16%		0.04%		0.18%		0.09%				0.02%		0.01%	0.18%	0.02%	0.01%					0.04%	0.02%	
Feb 18	100.00%	0.09%			0.02%	0.29%	0.65%		0.72%	0.07%	0.27%	0.06%	0.02%	0.58%	0.10%					0.58%		0.06%	0.01%	0.18%	0.02%	0.01%			0.02%		0.36%		
Mar 18	100.00%	2.90%	0.03%			0.16%		0.04%	1.44%			0.25%	0.01%	0.05%	0.02%	0.04%			0.09%			0.06%	0.05%	0.02%	0.08%				0.01%	0.01%	0.27%		
Apr 18	100.00%	0.06%	0.02%						0.04%	0.10%			0.23%	0.08%	0.05%		0.02%	1.39%	0.05%	0.02%	0.03%	0.04%	0.01%	2.69%	0.01%	0.24%							
May 18	100.00%	0.07%	0.07%	0.08%	1.30%			0.13%				0.09%	0.09%		0.08%	0.05%		0.03%	2.85%	0.02%		0.01%	0.01%	0.25%	0.02%	2.69%	0.01%						
Jun 18	100.00%	0.12%	0.05%	6.67%	0.11%	0.01%			0.02%	0.14%		0.02%	0.14%	0.10%	0.01%	0.04%	0.01%	0.01%	0.30%	0.03%			0.01%	0.37%	0.01%	1.24%							
Jul 18	100.00%	0.17%	0.12%	0.61%	0.74%	0.02%				0.09%	0.09%		0.50%		0.25%	0.01%	0.08%		0.07%	0.11%	0.01%	0.01%		0.01%	0.37%	0.01%	1.24%						
Aug 18	100.00%	0.16%	0.02%	0.22%		0.07%	0.02%	0.21%		0.23%	3.13%	0.03%		0.10%	0.03%		0.13%	0.17%	0.16%	0.05%	0.02%	0.02%											
Sep 18	100.00%	0.05%			1.24%	0.01%	0.49%		0.20%	0.04%	0.02%	1.15%	0.14%		0.60%	0.86%	0.08%				0.02%												
Oct 18	100.00%		3.96%			0.52%		0.05%	0.38%	0.15%	0.02%	2.95%	0.01%	0.08%	0.01%	0.10%		0.14%	0.02%														
Nov 18	100.00%			0.01%	0.17%	0.03%		1.31%	0.13%			0.23%	0.01%	0.23%	0.35%		0.18%	1.11%		0.01%													
Dec 18	100.00%	0.09%	0.13%	0.84%	1.84%		0.11%	0.02%	1.52%	0.94%	0.27%			0.01%	0.24%		0.43%	0.02%		0.09%													
Jan 19	100.00%	0.01%	0.03%	0.01%	0.02%	0.01%	0.19%	0.02%	0.17%	0.21%		0.01%	0.24%		0.23%	0.01%	0.44%	2.83%		0.09%													
Feb 19	100.00%	3.53%			0.11%	0.59%	3.66%	1.12%	0.37%	0.05%	0.31%	0.03%																					
Mar 19	100.00%		0.18%	0.12%	0.45%	0.06%	0.16%		0.01%	0.12%	1.64%	0.05%	0.07%			0.14%																	
Apr 19	100.00%	1.79%	0.05%		0.03%	0.51%	0.90%	0.03%	0.06%	1.95%		0.14%		0.21%																			
May 19	100.00%	2.77%	0.31%	0.11%		0.04%	0.17%		0.08%			0.05%																					
Jun 19	100.00%		0.21%	0.05%	0.02%	0.51%	0.02%		0.03%	0.02%	0.44%	0.06%	2.56%																				
Jul 19	100.00%	0.02%	0.25%	0.01%	0.36%	0.04%		0.02%	0.03%	0.10%		0.12%																					
Aug 19	100.00%	0.24%	0.05%	0.01%		0.33%	0.17%	0.01%																									
Sep 19	100.00%	0.55%		0.25%	0.15%	0.29%	0.01%	0.02%																									
Oct 19	100.00%	0.16%	0.01%			0.15%	0.56%	0.06%																									
Nov 19	100.00%	0.30%		3.13%	0.19%		0.60%	0.29%																									
Dec 19	100.00%	0.24%			0.01%	0.08%																											
Jan 20	100.00%	0.07%	0.05%	0.34%		0.35%																											
Feb 20	100.00%				0.03%																												
Mar 20	100.00%	0.03%																															
Apr 20	100.00%	0.06%																															
May 20	100.00%																																
Jun 20	100.00%																																
Grand Total	100.00%	0.46%	0.19%	0.55%	0.24%	0.20%	0.21%	0.14%	0.21%	0.14%	0.16%	0.19%	0.15%	0.07%	0.05%	0.13%	0.14%	0.07%	0.02%	0.03%	0.01%	0.14%	0.07%	0.07%	0.04%				0.02%	0.03%		0.01%	

That being said, a few cohorts performed unexpectedly well in specific months. For example, the November 2017 cohort, which averaged only 0.01% of original revenue in the second month, shot up to over 9% of original revenue in the third month. Similarly, the June 2018 cohort, which only retained 0.12% of original revenue in the first month, shot up to almost 7% in the third month. It would be interesting to know what was happening at these points in terms of marketing to see if any strategy going on at the time was particularly successful with the members of these particular cohorts.

Conclusions

A majority of Zomato users were in their 20's (90%) and had educational qualifications of Graduate or Postgraduate (91%). Over half of all users were Students. About 16% more Zomato users were male than female.

64% of total Zomato sales came from the city of Ahmedabad (64%). Neighborhoods / localities with the largest percentage of overall total revenue were all also located in this city, including Navrangpura (at about 17% of total revenue), Ghatlodia (14% of total revenue) and Vastrapur (14% of total revenue).

Most Zomato users seemed to have a preference for vegetarian dishes, as about 75% all orders placed were for Veg over Non-veg dishes.

North Indian and Indian food were the most popular types of Cuisine, with orders for North Indian cuisine generating about 21% of total revenue and orders for Indian cuisine generating about 16%. Chinese was a popular food sub-category within Cuisine types, including in both North Indian and Indian Cuisines.

Total number of users correlated positively with total sales over Zomato's January 2018 to June 2020 dataset. From 2017 to 2018, there was a significant peak in total Zomato users, as well as an almost 41% increase in revenue. 11% of that increase was generated in a single month - the period from December 2017 to January 2018. There was a significant decline in total revenue after this period, with sales decreasing by 9% in 2019 and an additional 41% by 2020, very possibly due to the pandemic.

In general, the months of July, December and February averaged the highest sales. Mondays and Fridays tended to generate the most sales on average.

Customer retention rate was very low, and as a result average revenue per cohort decreased markedly after the first order month. There were a few exceptions to this that might be worth investigating in further detail, including the third month of the November 2017 cohort, when average revenue shot up from 0.01% of total revenue to over 9%. Exceptions like these might indicate some particularly successful marketing strategies or perhaps the acquisition of some especially high value users that Zomato may want to know more about.

Recommendations

It is recommended that some strategies be put into place to significantly increase customer retention, such as the implementation of an active user loyalty program, or perhaps the establishment of semi-regular monthly promotional events designed to appeal particularly to repeat users. (ex. "Place 2 orders now, get next month's order half off.")

Marketing and advertising for these promotional events and offers can be assimilated most heavily before and on Mondays, in anticipation of the most active weekday on average. The largest promotional events and "come-ons" could take place in months such as July, December, or February, to take advantage of the most active average times of the year.

It might also be worthwhile to do some market research into when and where most users first heard about / or started using Zomato. As over half of all users are students and 90% either have Graduate or PostGraduate educational qualifications, it's possible that Zomato has a major potential in and around the educational industry.

If market research validates this hypothesis, it might be wise to contribute greater marketing/advertising resources into college campuses and other places that young college students in their 20's might aggregate to study. In particular, such places in and around the city

of Ahmedabad, especially in neighborhoods/localities such as Navrangpura, Ghatlodia, and Vastrapur, might be good places to try first. Specific food imagery could showcase delicious North Indian and Indian dishes, particularly popular Veg dishes or those of the Chinese food sub-category.