MEESHO DICE | PROBLEM STATEMENT 2

Optimising Customer Experience, CLV & Profitability for an E-Commerce Company

Produced By | Team Crusade

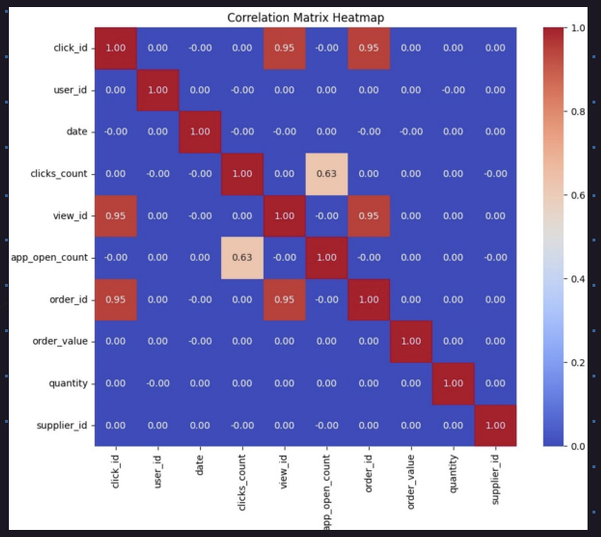
Problem Overview | Key Business Challenges

EXPLORATORY DATA ANALYSIS (EDA)

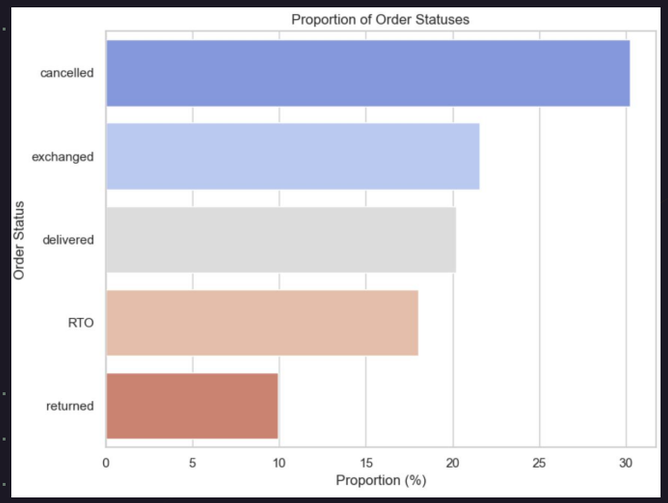
KEY PERFORMANCE INDICATORS (KPI)

Click Through Rate (CTR)	Conversion Rate	Average Click per User	Clicks to App-Open Rate	Total Order Value
1176.43%	8.5%	117.66	48.02%	₹2500132333.99

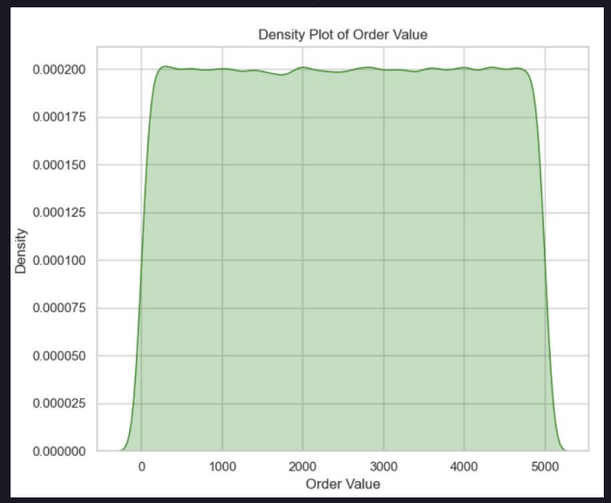
Average Order Value(AOV)	Order per User	Order fullfillment rate	Return Refund Rate
₹ 2500.13	10	41.83%	27.96%



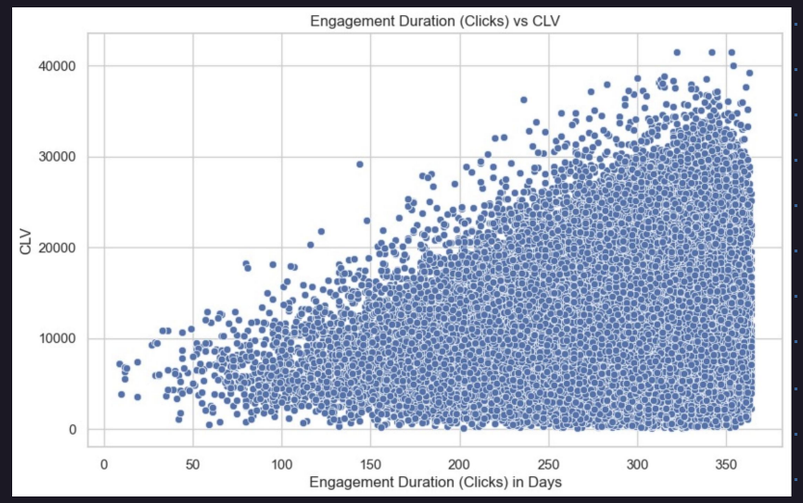
CORRELATION HEATMAP



Order Status Proportion



Order Value Density

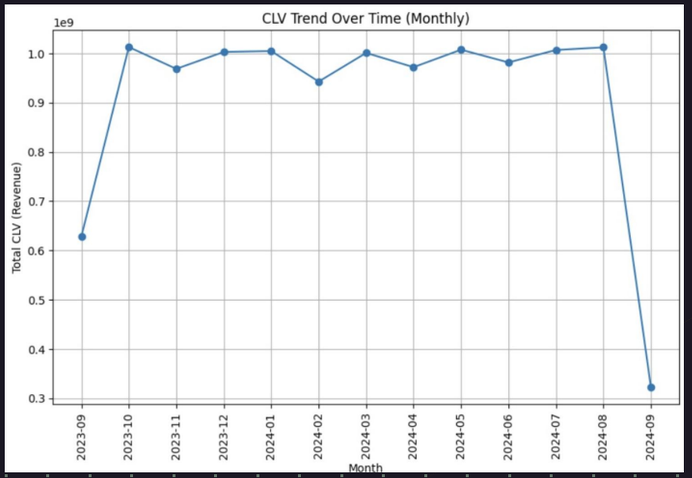


Customer Engagement w.r.t CLV

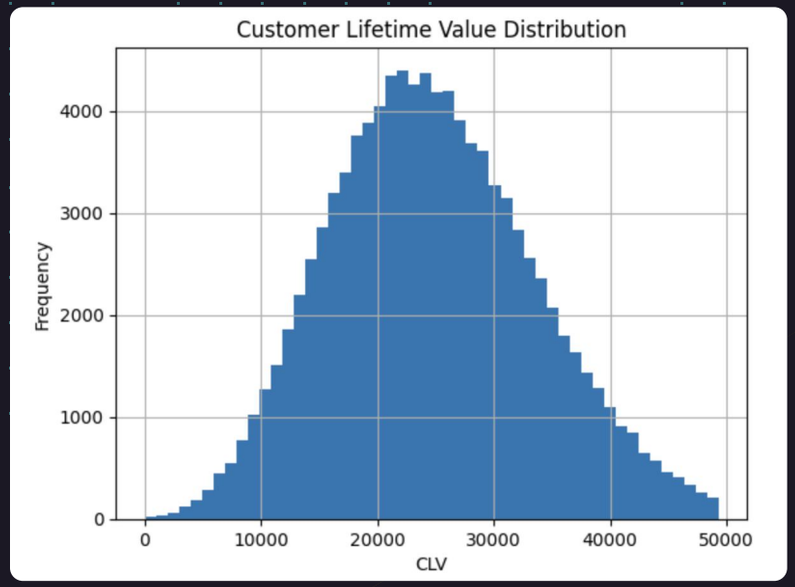
Customer Lifetime Value | Calculation

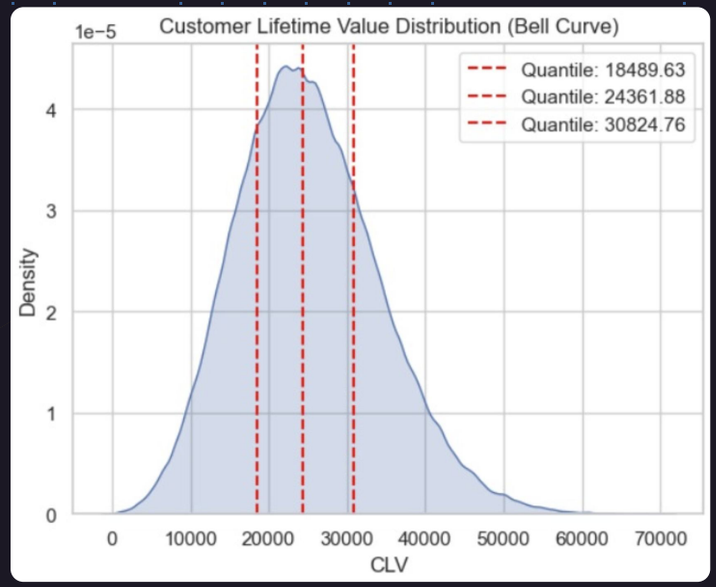
→ CLV: Total Revenue generated by a customer over the course of their relationship with the business.

→ CLV can be calculated using various methods, with Recency, Frequency and Monetary (RFM) being one.



→ CLV w.r.t users which doesn't show much variation.





→ CLV distribution (after removing outliers) w.r.t the customer count.

→ Bell curve on the right show's the customers 50th percentile, which certainly are customers generating profit to the business.

→ In the next section, we will dive deep into the customer segmentation part where we will see how every segment of a customer is performing in terms of business.

High CLV Segment Summary:

	avg_order_value	purchase_frequency	avg_time_between_purchases
count	19998.000000	19998.000000	19998.000000
mean	3176.952903	9.382438	0.007782
std	246.166221	3.120115	24.746933
min	2899.451111	1.000000	-308.000000
25%	2991.877227	7.000000	-13.053571
50%	3109.423722	9.000000	0.000000
75%	3293.784554	11.000000	13.000000
max	4825.260000	23.000000	343.000000

Low CLV Segment Summary:

	avg_order_value	purchase_frequency	avg_time_between_purchases
count	19998.000000	19998.000000	19998.000000
mean	1821.622082	9.340584	0.014351
std	246.410298	3.101710	25.713323
min	43.200000	1.000000	-290.000000
25%	1703.680040	7.000000	-13.200000
50%	1887.140873	9.000000	0.000000
75%	2009.052242	11.000000	13.440476
max	2101.554286	24.000000	335.000000

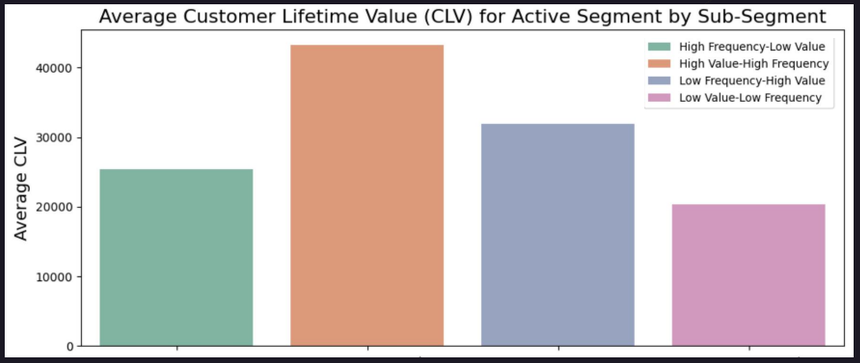
Customer Lifetime Value | Customer Segmentation

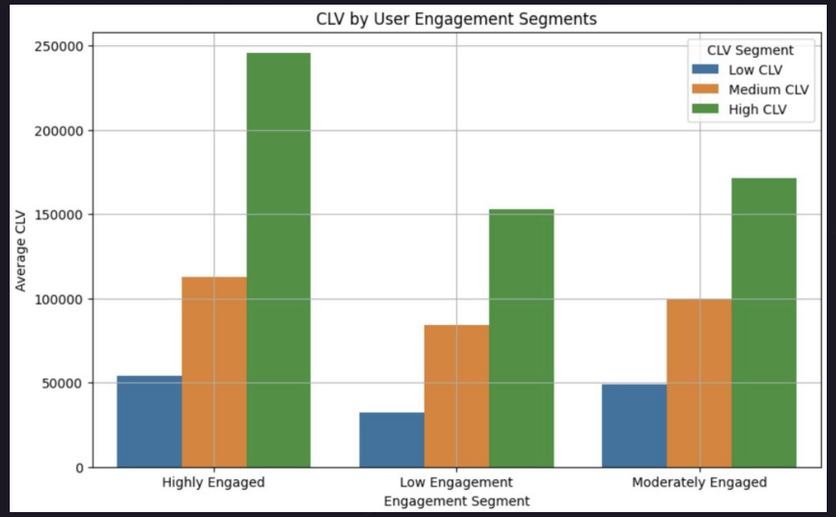
→ We have segmented the customers on the basis of RFM Values.

→ Creating sub segments for these gives even better understanding of the customer purchase behaviour which is on the based of engagement.

→ **Summary of the customer segmentation is given below.**

Engagement Segment	CLV Segment	User Count	Average CLV
Highly Engaged	Low CLV	196	53950.109031
Highly Engaged	Medium CLV	4556	112434.151596
Highly Engaged	High CLV	23941	245816.117986
Low Engagement	Low CLV	24283	32454.570792
Low Engagement	Medium CLV	4632	83945.510563
Low Engagement	High CLV	70	152923.856429
Moderately Engaged	Low CLV	8344	49196.063033
Moderately Engaged	Medium CLV	23633	99295.768022
Moderately Engaged	High CLV	8812	171421.060767





→ **Key Takeaways**

→ Highly Engaged Customers posses higher CLV and are likely to **generate more revenue**.

→ These customers are often **loyal**, offer **profitability** and have a **reduced churn rate**.

→ One must focus on nurturing these customers as they can yield significant long-term benefits to the business.

→ Moderately Engaged customers tend to have average CLV.

→ These customers have extreme **potential of growth** from the business point of view.

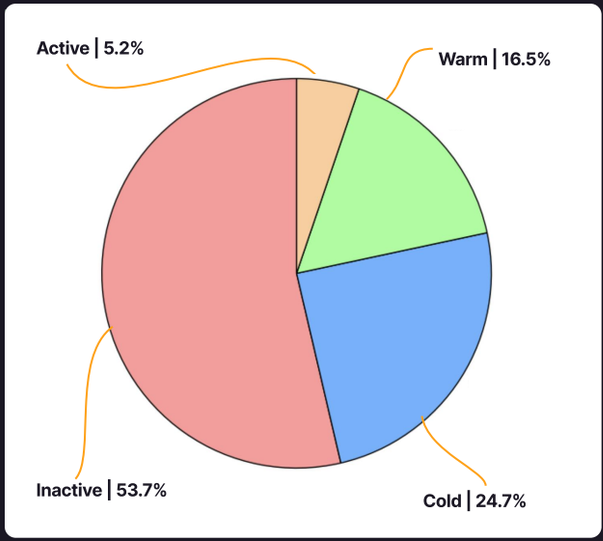
→ Customers with Low Engaged have very low CLV as compared to the rest of the two.

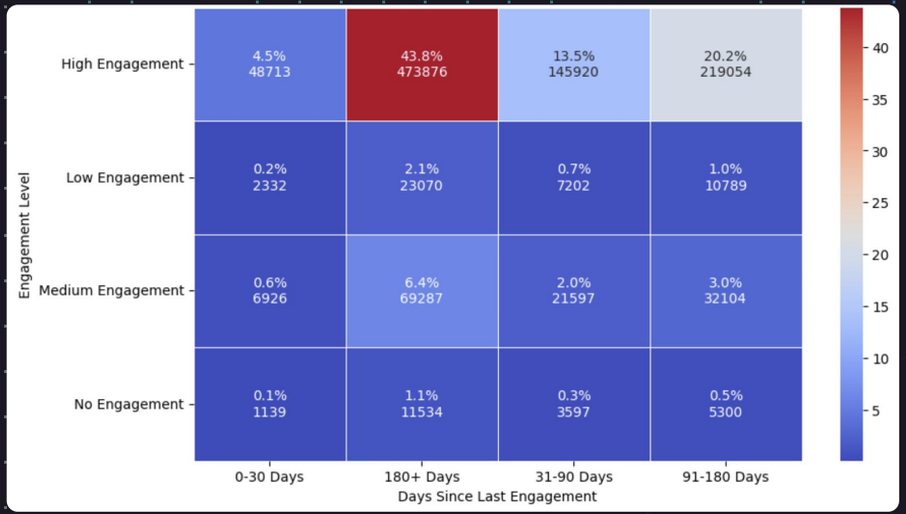
→ These are very usually **Price Sensitive** or **less likely to purchase** users.

→ They have very high churn rate and because of that they might not prove profitable to the business.

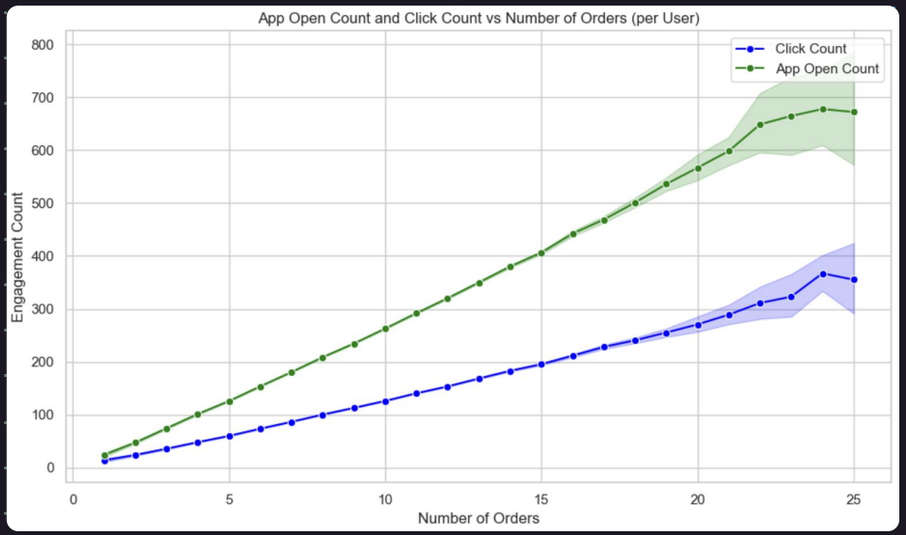
→ In the next slide we look in to enhancing CLV's for each such these segment.

Customer Lifetime Value | Measures to improve





Customer Engagement Matrix



App Open / Click Count vs Orders Count

→ Improving CLV

→ 1. Build/implement better **cross** & **up-selling** strategies.

→ 2. Retarget **inactive** and **cold** customers.

→ 3. Work thoroughly on the **warm customers** as they are new to the business.

→ 4. Encourage **higher value sales** in the **clothing** category over a period of time as doing it immediately would scare customers and lead to at customer **attrition**.

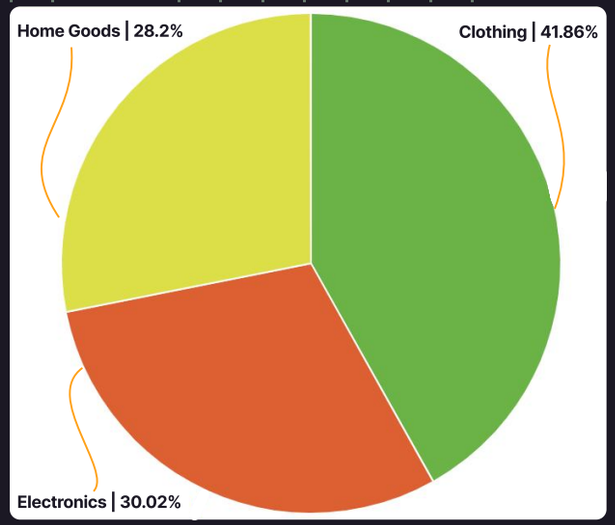
→ 5. Give special attention on the customers making purchase in the **clothing** category as that has the **highest** number of **orders**.

→ 6. Highly engaged customers (**43.8%**) have **not** interacted for 180+ days. Retaining these customers would be feasible for CLV improvement.

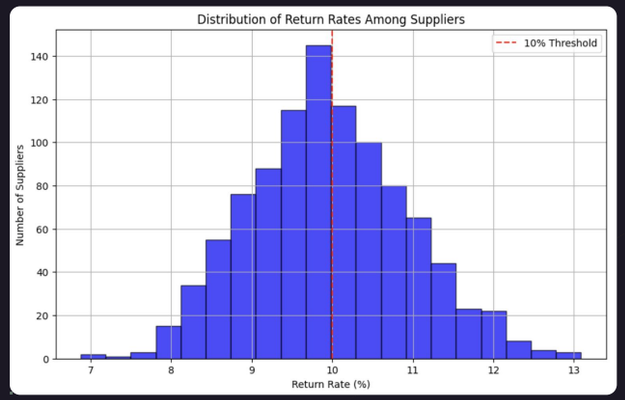
→ 7. Improve **personalized recommendations system** and introduce **customer loyalty programs** as Users tend to **open** the mobile application but **do not click** on the product shown and moreover, do **not place orders** when clicked on products.

→ 8. Seek **in-depth** feedback from customers to understand more about their purchase behaviour and act on them accordingly.

Return Rate Analysis



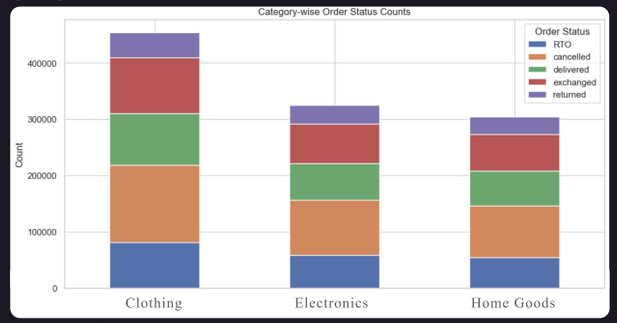
→ **Clothing** has the maximum return rate, followed by **Electronics** & **Home Goods**



→ The most common return rate among all the suppliers is 10%.

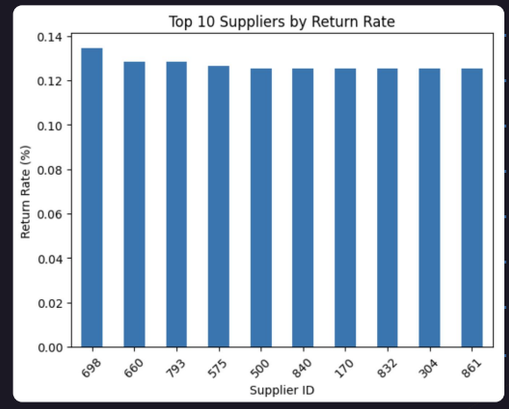
→ Focusing on **improving** the **product quality** around all product categories will significantly **reduce** the **product return rate**.

→ Consider **enrolling more feedback options** at the **time** of return which ultimately leads to **better understanding** of the return rate.



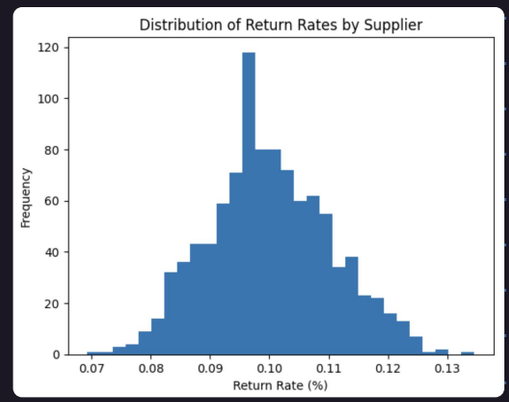
→ A significant variation is present among the suppliers w.r.t return rate

→ Giving more attention to the suppliers with return rate above 10% will help in reducing the return rate



Measures to reduce return rates

→ Integrate "**see yourself before you buy**" - in app **3D dress VR tool** for customer satisfaction on the product.



→ Implement **supplier onboarding strategies** and **checks** for better product quality.

→ Create **supplier segments** w.r.t the return rate and work with them for **improving the product quality** which would lead to improved customer satisfaction and **trust** on the platform.

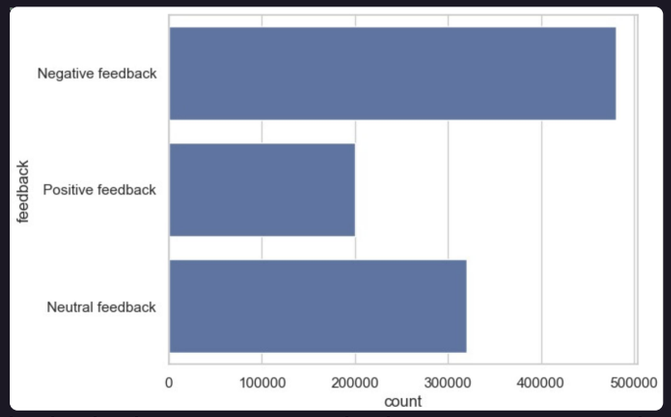
→ Encourage product **Exchange** more than return by **prompting** exchange when user willing to return.

→ Improve **accuracy** and **speed** of the delivery.

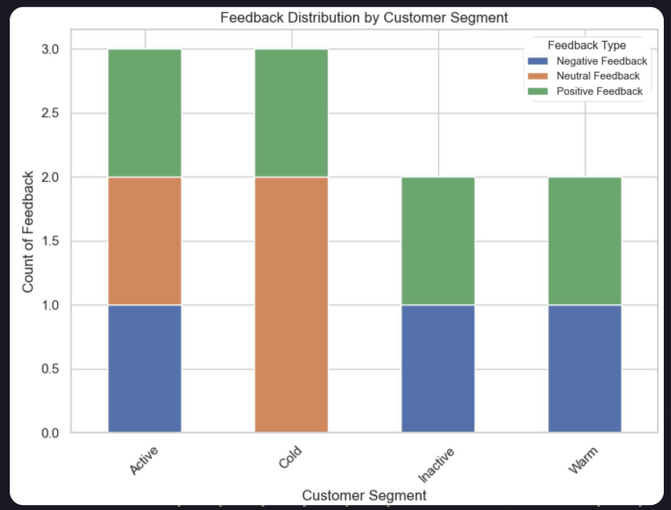
→ Show **personalized products** to Customers with high return rate, **reduce discounts** for them as RTO products **impacts** the revenue of the business overall.

→ Ensure **in-dept description** for products in **Electronics** and **Home Goods** category as they are generally expensive and a second thought is usually given.

Sentiment Analysis

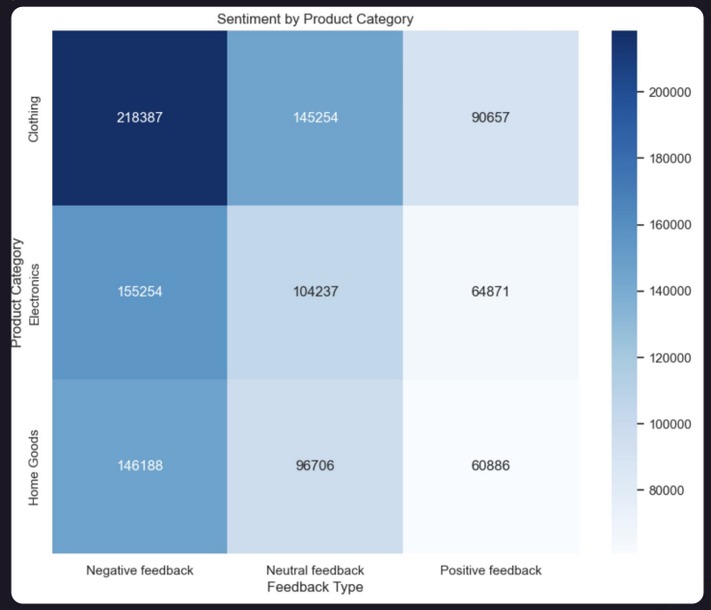


Feedback v/s Count



Feedback Count v/s Customer Segment

→ **In-Active & Warm** customers tend to posses a relatively positive feedback.



Product v/s Sentiment Matrix

→ Company must focus on **active customers**, the high number of **negative feedbacks** from the active customers indicate need to improvement in that customer segment.

→ **Highest Neutral Feedback** indicating customers with mixed experience which means customers are **unsure** about the product.

→ While **cold customers**, have limited interaction, its important to engage them and encourage them to become more active over.

→ **Electronics** category seems to be performing well in terms of customer satisfaction.

→ **Clothing** appears to be the most problematic category and customer satisfaction.

Order Status and Customer Feedback

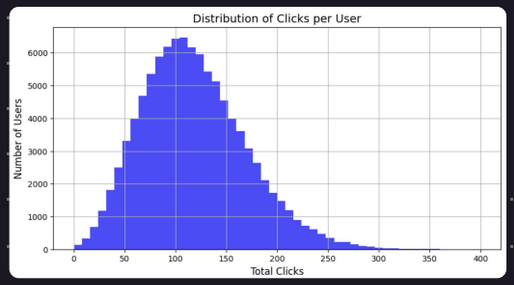
feedback order_status	Negative feedback	Neutral feedback	Positive feedback
RTO	86334	57564	36096
cancelled	145196	96860	60015
delivered	97086	64585	40617
exchanged	103730	69037	43287
returned	47938	31671	19984

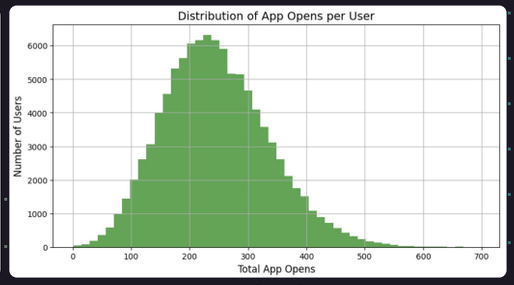
→ **Cancelled** orders have a relatively high rate of negative feedbacks suggesting potential issues with the ordering process such product availibility and product delivery

→ **RTO** orders have highest negative feedbacks suggesting issues with delivery factors.

→ **Exchanged or Returned** orders have a considerable amount of negative feedback indicating problems with **product quality**, **fit**, **colour issues** & **Damaged Products.**

Revenue Growth Optimization





→ Both distributions are **right-skewed**, indicating a small number of users have significantly **higher click** and **app open** counts.

→ Distributions also indicate that a fair number of users will get back to the app and use it again following **app stickiness**.

→ As indicated by clicks to orders ratio earlier, it could be interpreted that a fair amount of users might be **habitual clickers** or they are not getting the right product recommendation.

→ **Cancelled / RTO / Returned** orders sum up to a high value indicating a need for strict quality control, customer support measures and issues with customer experience.

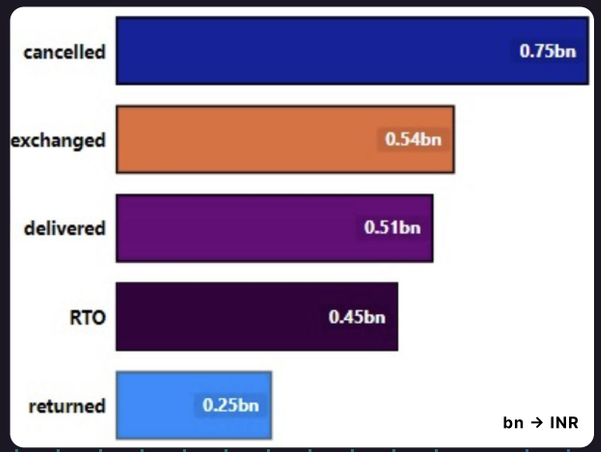
→ RTOs might indicate problems with the delivery process, like incorrect addresses or failures which leads to incomplete delivery.

→ These would contribute to **significant increase** in revenue if the issue with **order_status** is **resolved**.

→ Strategies for Revenue Growth Optimisation

→ Identify the **causes** behind high cancellation rates through customer surveys and resolve them which would lead to a significant increase in revenue.

→ Identify whether or not the order to be delivered is getting **delayed** by a significant amount wherein the **desired window** of that product is **not viable**.



total order_value v/s order_status

→ Build a **coupon, reward, referral and loyalty program** based system to retain and increase the customer base.

→ Wherein the user can use the rewards to avail discounts on products.

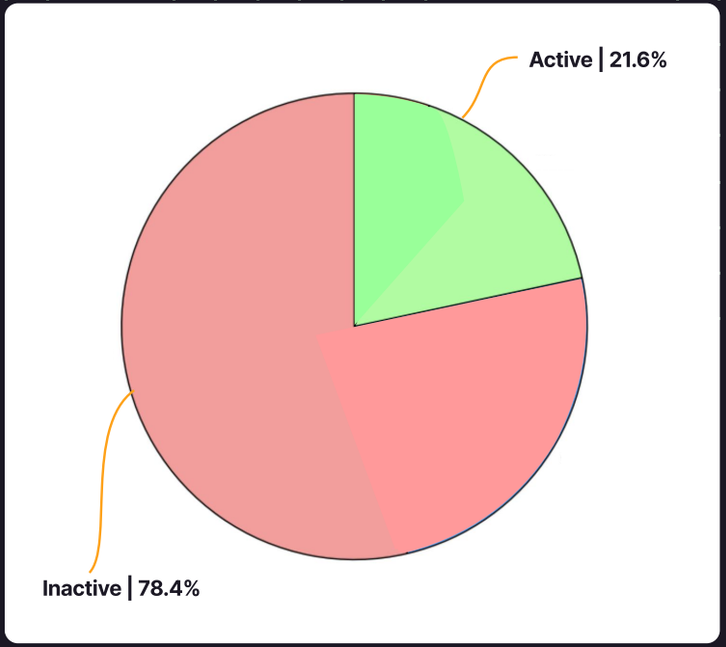
→ Gamify the app experience to make the application engaging to the customer and keep rewards for the same.

→ Improve recommendation systems for integrating **cross & up** selling among the different product categories.

→ Increase a sense of **urgency** by offering limited time deals.

→ Integrate constant cart reminders through notifications, emails, etc for resolving the issue of **cart abandonment.**

Customer Retention



→ Its a proven matrix that customer retention is always profitable than acquiring new one's.

→ The presence of a long tail indicates that a small number of customers have not interacted for an extended period.

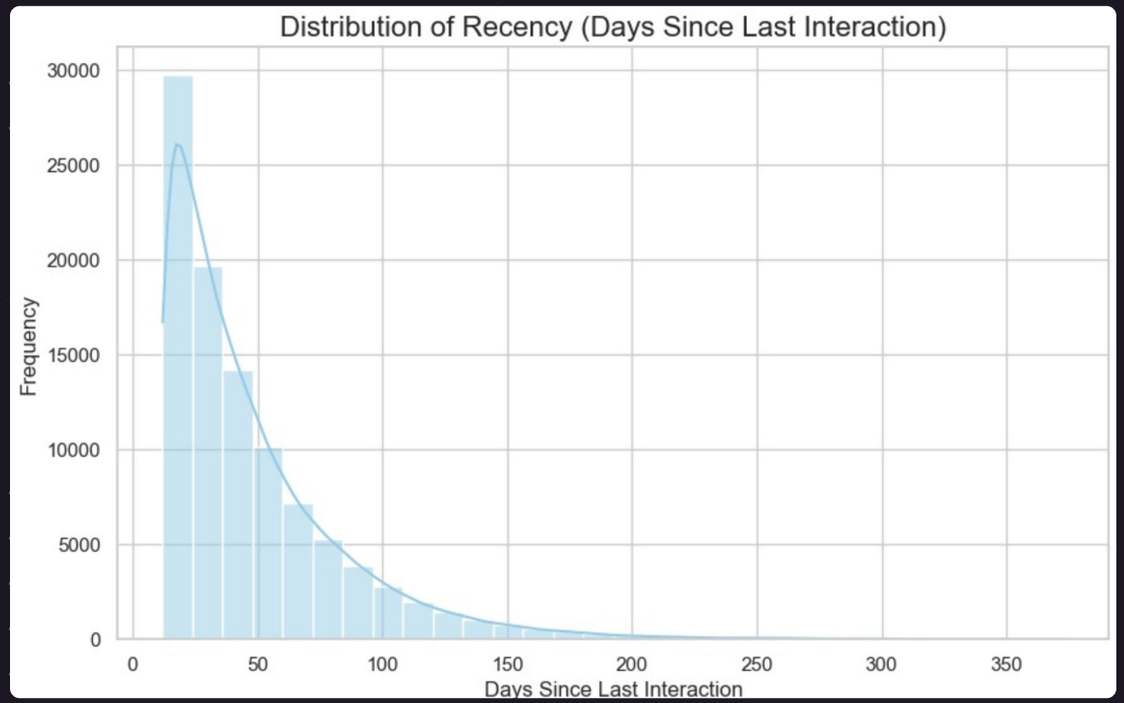
→ Customers with a longer time since their last interaction are at a higher risk of **churning**.

→ Reach out to churned customers for retaining them back.

→ Offer tailored promotions or discounts to customers who have been inactive for a certain period.

→ Reward frequent customers with exclusive benefits to encourage continued engagement so that the customer doesn't leave the platform.

→ Examine the distribution over time to identify trends or changes in customer engagement patterns.



→ Keep sending notifications to previously inactive users based on their past engagement.

→ Implementing instant response and resolution to problems and issues.

→ Strict product quality checks on the supplier end.

→ Onboard customers strategically by learning about their preferences to provide a better experience.

→ Having a strong social media presence to keep the brand image on top of the customers mind.

Thank You