



Strategy Storm 2025

Problem Statement

Due to high churn rates,
Blinkit must analyze the
underlying factors influencing
customer behavior.





The T.E.A.M



THE MASTERMINDS BEHIND THE IDEAS



PRANAY



PALKUSH



TANAY

We are a group of three passionate individuals who love to find the pain points in the market and uncover the root causes of problems. Our strong foundational base in Computer Science allows us to leverage high-end models to drive effective business decisions.

WE BRING TECHNOLOGY AND CONSULTING TO THE SAME TABLE!!



Data Set Insights

- Total Customers Analyzed: **16,093**
- Major Features: **CustomerAge, Tenure, ServiceUsageRate, SupportCalls, BillingDelay, PlanType, AgreementDuration, TotalExpenditure, RecentActivity**
- Target Variable: **Churn**

Clustering Results

- **4** Clusters on the basis of **6** features using K-Mean.
- Cluster Distribution: **[0]. 3792**
[1]. 4349
[2]. 4257
[3]. 3695

Key Findings

Churn Analysis

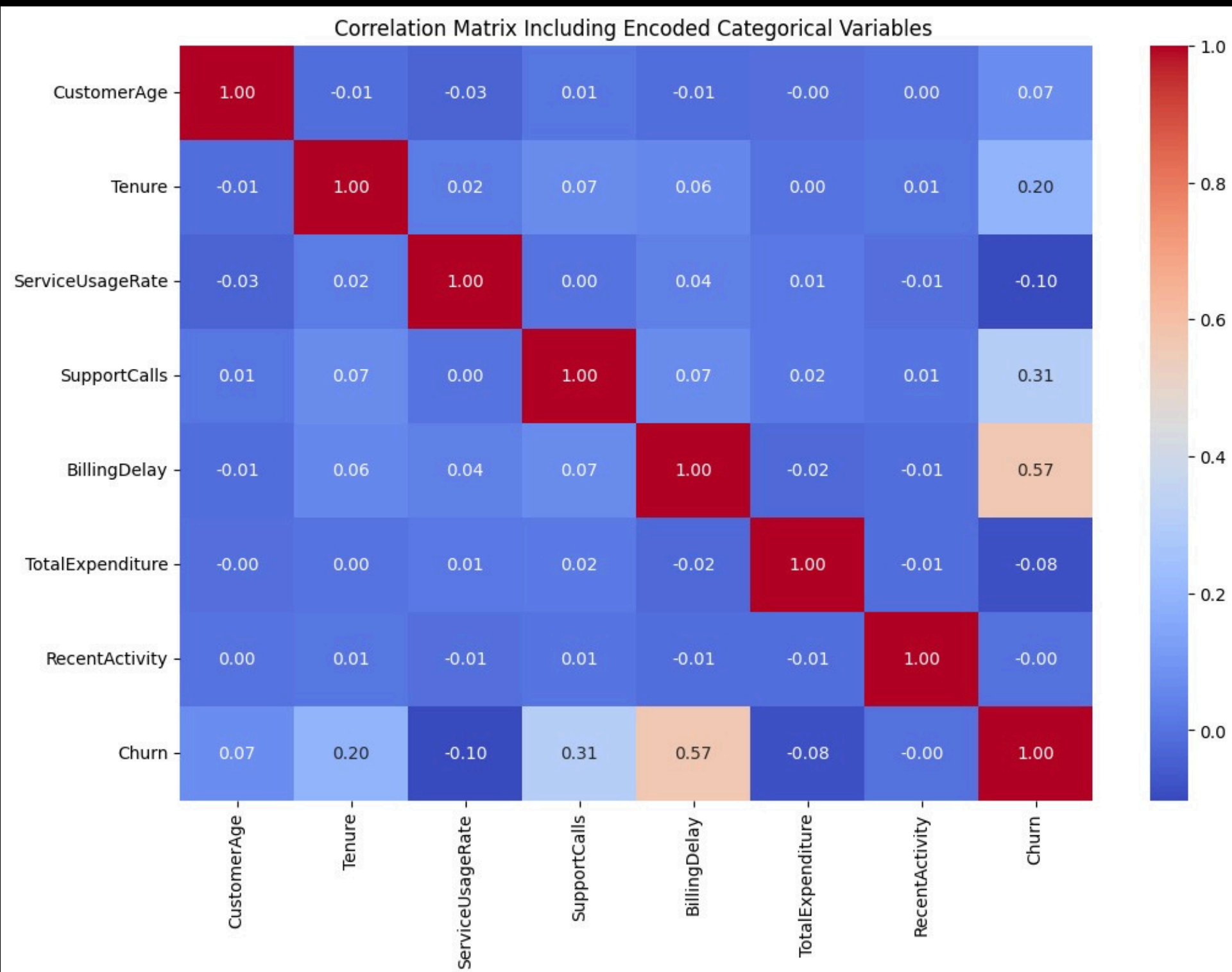
- Overall Churn Rate: **47.35%**
- By Plan-type: 1.Basic - **47.89%**
2.Premium - **46.26%**
3.Standard - **47.90%**

Statistical Insights

- Customer Age:
 - Mean: **42 years**
 - Range: **18 to 65 years**
- Tenure:
 - Mean: **32 months**
 - Range: **1 to 60 months**
- Billing Delay:
 - Mean: **17 days**
 - Std Dev: **8.83**
 - Range: **0 to 30 days**
- Support Calls:
 - Mean: **5.4 calls**
 - Std Dev: **3.12**
 - Range: **0 to 10 calls**



Our Analytical Approach



Correlating The Features to Churn

The Two Factors :
Billing Delay (0.57)
Support Calls (0.31)
Correlate highly with the Churn.

This gives us the much needed insight into the increasing churn rate.

We can focus on fixing these two factors and eventually the churn rate would fall.

Random Forest Model

Accuracy

99.37%

DataSet Split

Training

Testing

80.00%

20.00%

Confusion Matrix:

```
[[1657  7]
 [ 13 1542]]
```

Classification Report:

	precision	recall	f1-score	support
0	0.99	1.00	0.99	1664
1	1.00	0.99	0.99	1555
accuracy			0.99	3219
macro avg	0.99	0.99	0.99	3219
weighted avg	0.99	0.99	0.99	3219

Accuracy Score: 0.9937868903386144

Proposed Solutions

1. Addressing Billing Delays

- Load Balancing:
Distributes payment requests evenly across servers during peak times.
Reduces server overload and ensures faster processing.
- Third-Party Payment Gateway:
Partner with a reliable payment gateway.
Acts as a backup during excess server load.
Ensures seamless payment processing during high demand.

2. Customizing Notifications

- Tiered Proactive Outreach:
Low Risk: Personalized reminders or recommendations.
Medium Risk: Targeted discounts or premium plan trials.
High Risk: Dedicated retention team with tailored solutions.
- Blinkit Mood Barometer:
Use sentiment analysis and contextual factors like weather, time of day, and demographics.
- Examples:
Rainy days: Suggest indulgent treats.
Busy evenings: Recommend quick meal options.
Age and day-specific suggestions to optimize relevance.

3. Customer Credit System

- Introducing a Customer Credit System:
Identify customers with a strong record of genuine support calls.
Reward them with access to premium human-agent support.
Enhances customer satisfaction, builds loyalty, and incentivizes responsible behavior.

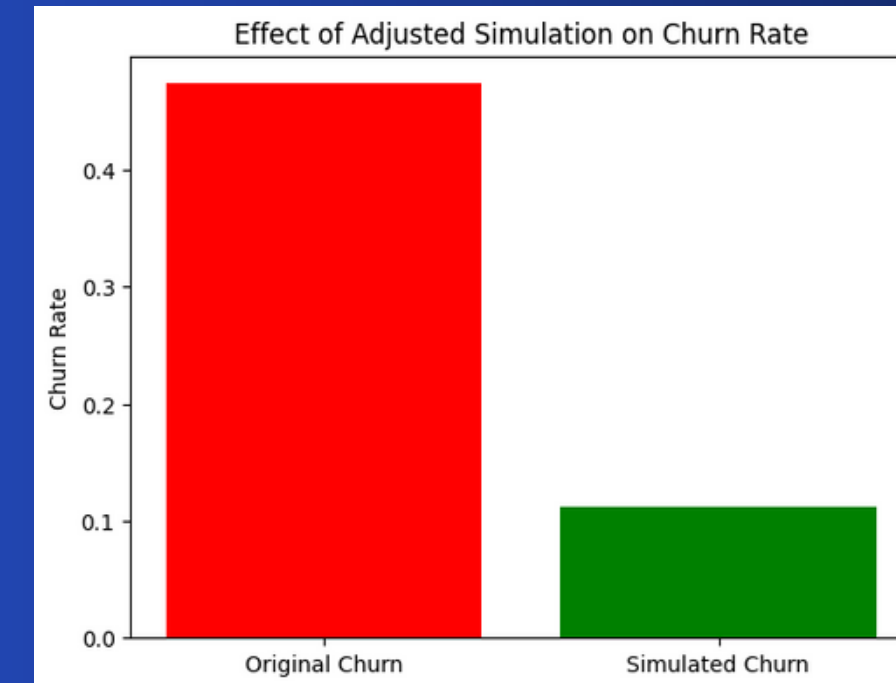
Effects

We Aim to Predict The Churn Rate After:

- Reducing *Billing Delays* to 65%
- Minimizing *Support Calls Placed* by 40%

Here, we try to simulate the above stated conditions and predict the Churn value [0,1] through our trained Random Forest Model.

Original Churn Rate: 0.47349779407195675
Simulated Churn Rate: 0.11166345616106382



FINALLY,
THE CHURN RATE IS
REDUCED TO 11%



Appendices

1. Github

<https://github.com/Palkush003/Blinkit-Churn-Rate->

2. Random Forest Model

[https://drive.google.com/file/d/1JSYnLfl8c2_bH1OnPt5qgiTfPF7x6Tis/view?
usp=sharing](https://drive.google.com/file/d/1JSYnLfl8c2_bH1OnPt5qgiTfPF7x6Tis/view?usp=sharing)

3. K-Mean for Customer Segmentation

https://drive.google.com/file/d/1MKN_rDaz1j9Y8-smEjFYGQHUiifeqMng/view



Thank You

The Strategy Storm 2025 Case Study Competition was extremely engaging and challenging at the same time. Our team really enjoyed researching the ground market conditions and finally coming up with an exciting solution. We look forward to see you !