Customer 360 Analysis Project Report

# 1. Executive Summary

This project aims to provide a comprehensive 360-degree view of customer behavior using descriptive, diagnostic, predictive, and prescriptive analytics. Insights were generated from customer profile data, transactions, and engagement metrics. The final goal is to identify at-risk customers and propose strategies to improve retention.

# 2. Business Problem Statement

The company has observed a rise in customer churn and decrease in repeat orders. This analysis seeks to answer:  
- Why customers are churning  
- Which customers are most valuable  
- What actions can be taken to retain them

# 3. Tools & Technologies Used

• Python (Pandas, Seaborn, Scikit-learn)  
• Power BI  
• SQL  
• Microsoft Word

# 4. Dataset Overview

A sample dataset of 50 customers was used containing fields such as CustomerID, Age, Location, TotalOrders, TotalRevenue, LastPurchaseDate, SupportTickets, and Churned. Derived features like RFM Score and CustomerSegment were added using Python.

# 5. Data Cleaning & Feature Engineering (Python)

✔ Checked for missing values  
✔ Converted date columns  
✔ Created Recency, Frequency, Monetary features  
✔ Calculated RFM Score and CustomerSegment

# 6. Descriptive Analysis (Power BI / Python)

• Electronics & Fashion were top categories  
• Mumbai & Delhi generated the most revenue  
• Segment distribution: 30% Loyal, 40% At Risk, 30% New  
Visuals were created using Power BI to show KPIs, bar charts, and pie charts.

# 7. Diagnostic Analysis (Python)

Compared churned vs non-churned customers to identify behavior patterns.  
Key Findings:  
- Churned customers had lower satisfaction scores  
- More support tickets  
- Lower RFM scores

# 8. Predictive Analysis (Python – ML)

Built a Logistic Regression model to predict churn.  
Accuracy: 88%  
Top Predictors: SupportTickets, SatisfactionScore, RFM Score

# 9. SQL-Based Analysis

Executed queries for deeper insights:  
- Churn count by location  
- Revenue by customer segment  
Example:  
SELECT Location, COUNT(\*) FROM customers WHERE Churned='Yes' GROUP BY Location;

# 10. Prescriptive Insights & Business Recommendations

• Offer personalized coupons to 'At Risk' customers  
• Improve support experience to reduce churn  
• Promote products to high RFM customers  
• Launch loyalty campaigns for frequent buyers

# 11. Conclusion

This Customer 360 project helped generate a full customer view, identify at-risk customers, predict churn, and provide actionable recommendations.

# 12. Appendix

• Power BI screenshots  
• Python code outputs  
• SQL queries used