

Ecommerce Data

UNDERSTANDING
CONSUMER
BEHAVIOR ANALYSIS

A MACHINE LEARNING APPROACH FOR E-COMMERCE TRENDS

Ecommerce Presentation
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CONTENT OUTLINE



- BUSINESS OVERVIEW
- PROBLEM STATEMENT
- DATA MODELLING
- DATA MANIPULATION
- CONCLUSION
- RECOMMENDATIONS

BUSINESS OVERVIEW

The Project is aimed at analysing consumer behavior on E-Commerce Platforms. The results from this study could enable E-Commerce platforms to leverage real-time consumer data to make data-driven decisions and make more sales.



PROBLEM STATEMENT

Despite the rapid growth of the e-commerce sector, businesses face challenges in comprehensively understanding customer behavior. The lack of detailed insights into user preferences, navigation patterns, and purchase decision factors hinders the ability to tailor services and offerings effectively. This project aims to address this gap by conducting a thorough analysis of customer behavior on e-commerce platforms, identifying pain points, and proposing solutions for a more personalized and seamless user experience.

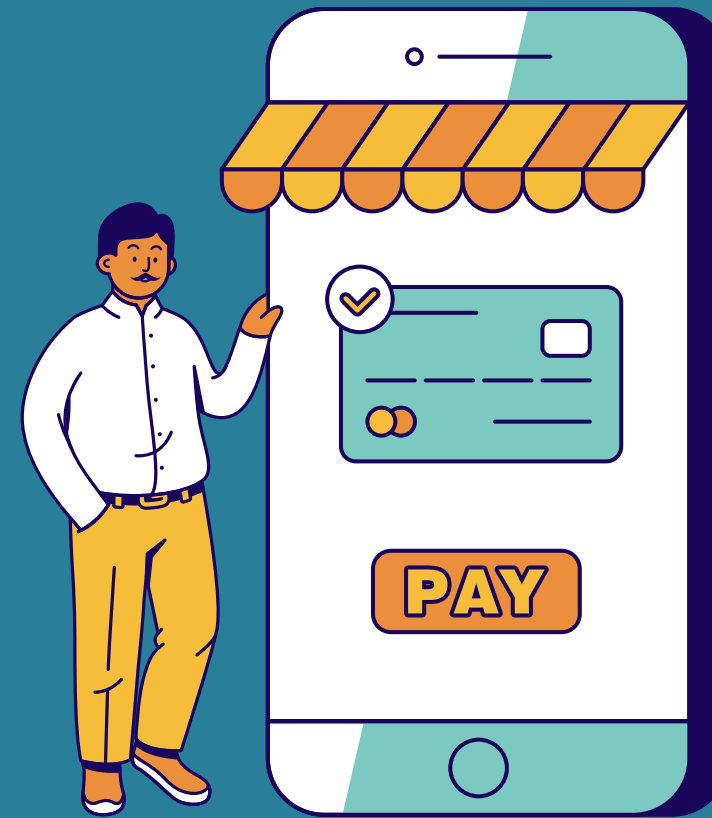


OBJECTIVES



Customer Segmentation

Identify and classify different customer segments based on their behavior, preferences, and buying patterns.



User Journey Analysis

Map out the typical user journey on the e-commerce platform, highlighting key touchpoints, drop-offs, and areas of improvement.



Conversion Rate Optimization

Identify factors influencing conversion rates and propose strategies to optimize the conversion funnel.



Predictive Analytics

Utilize predictive modeling to forecast future trends in customer behavior and anticipate potential challenges.

**DATA
UNDERSTANDING**

**DATA
CLEANING**

**EXPLORATORY
DATA ANALYSIS**

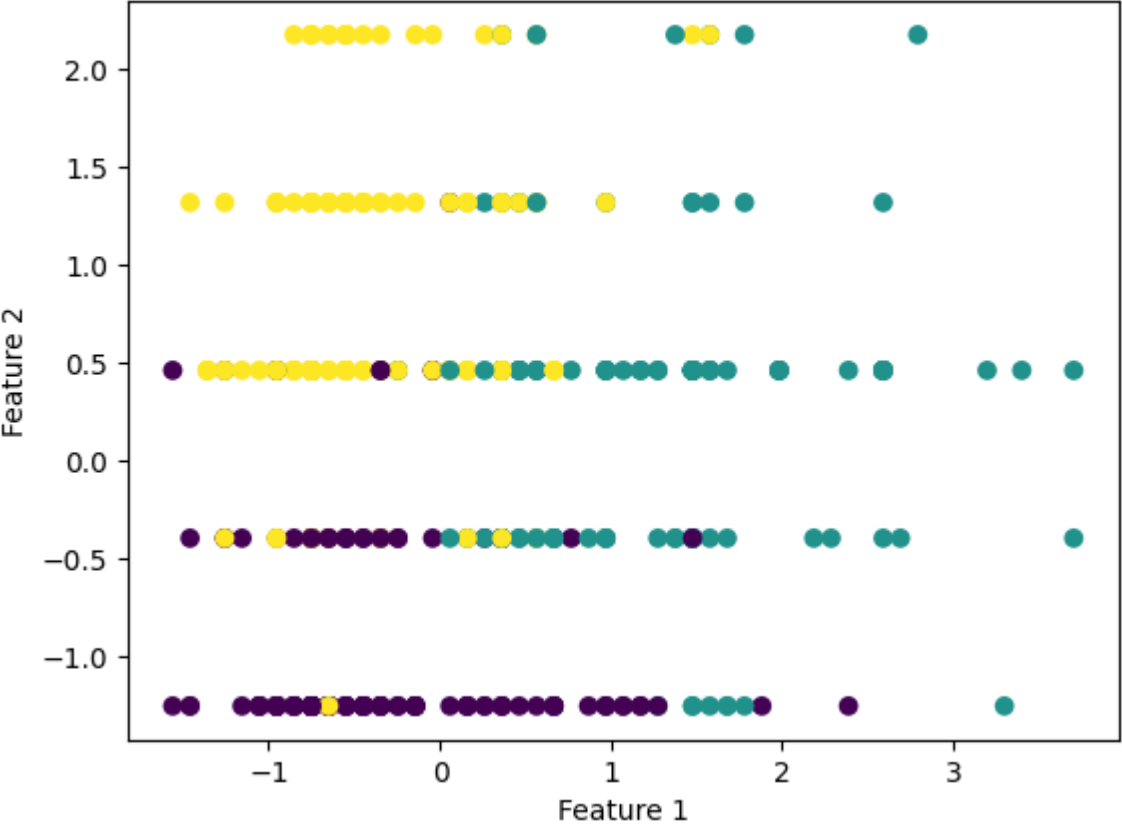
**DATA
PREPROCESSING**

**FEATURE
ENGINEERING**



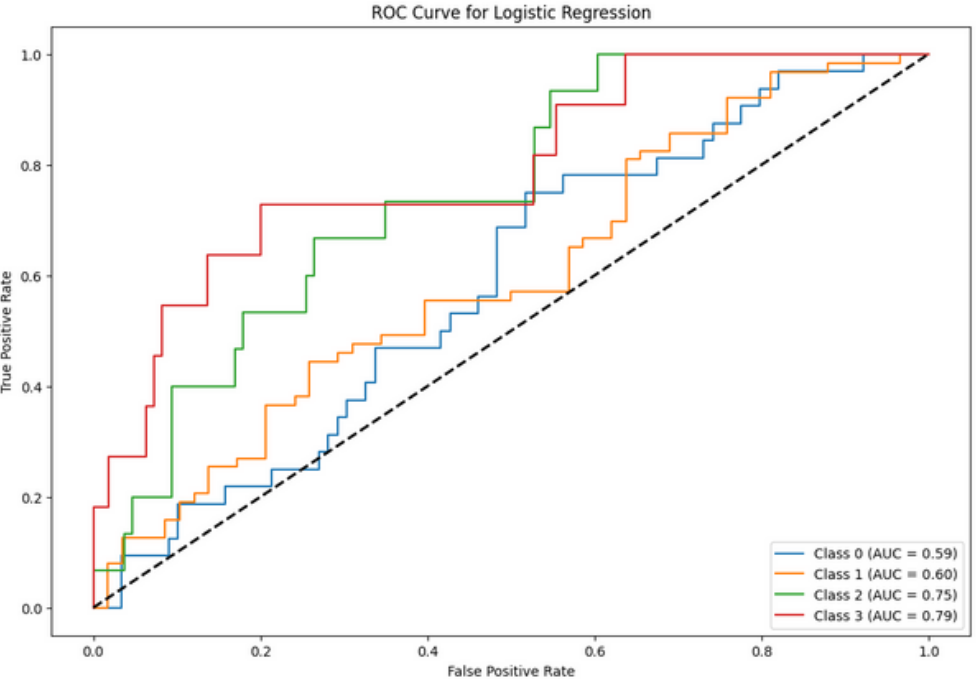
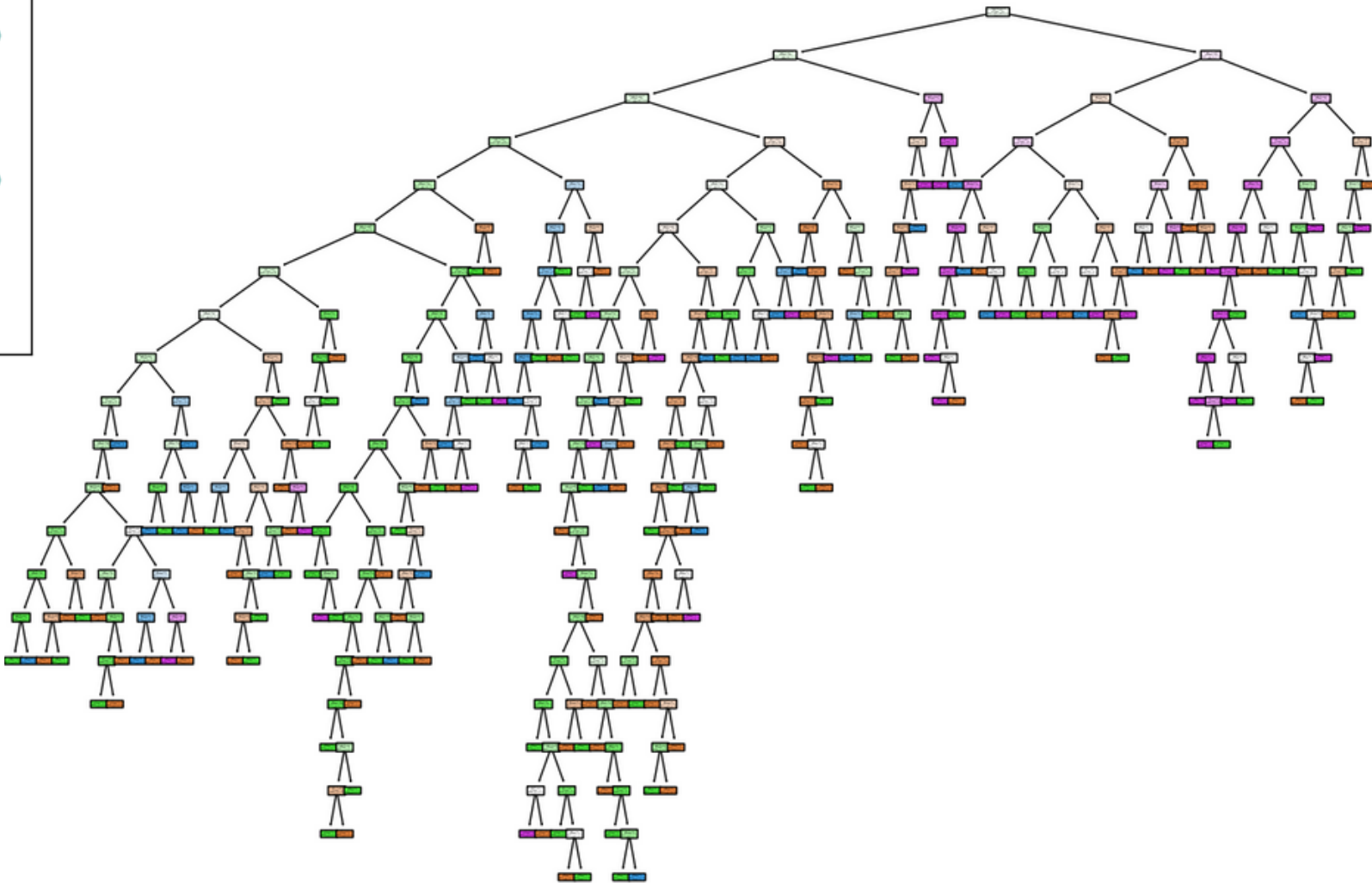
MODELS USED

K-means Clustering



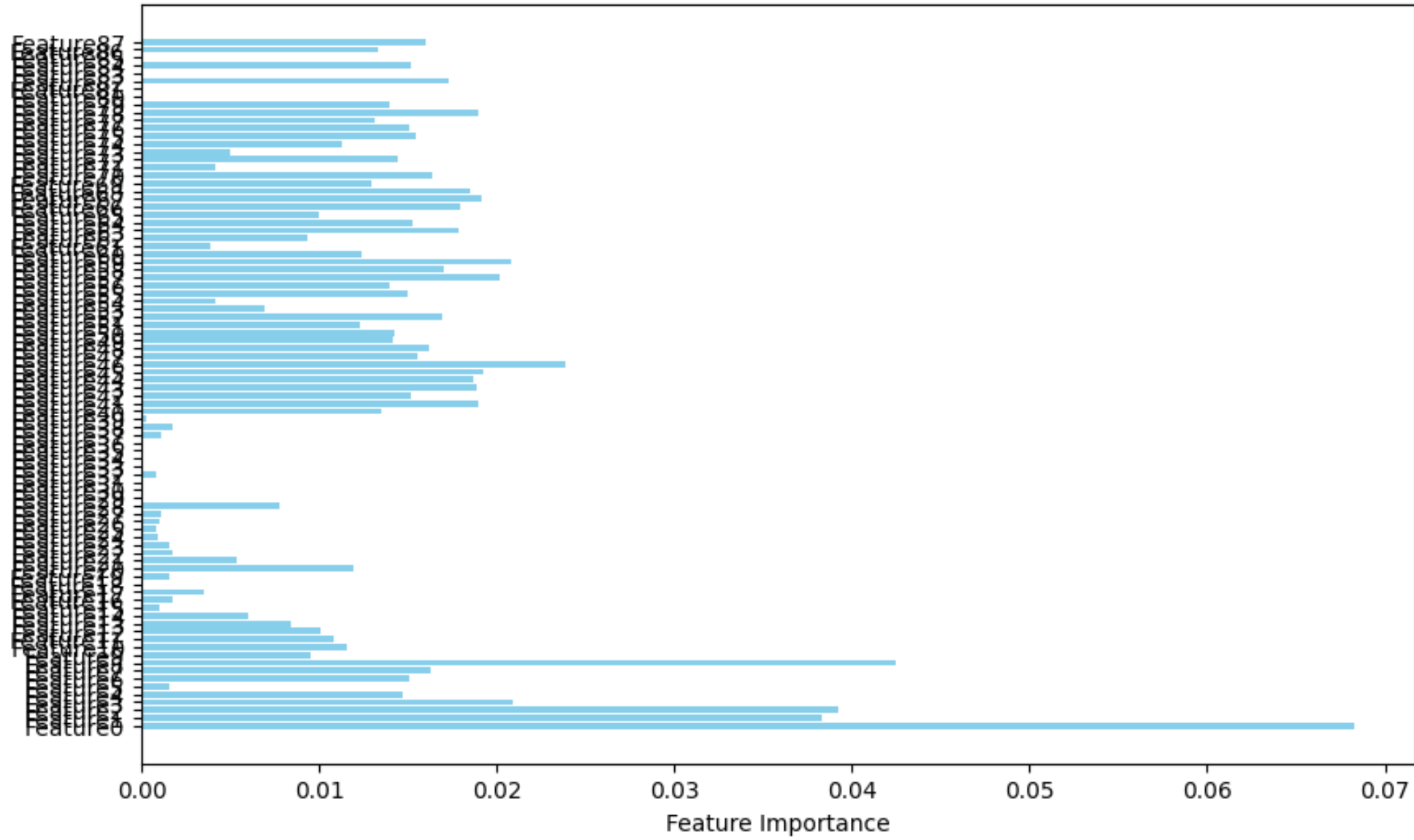
**Logistic
Regression**

**KMeans
Clustering**



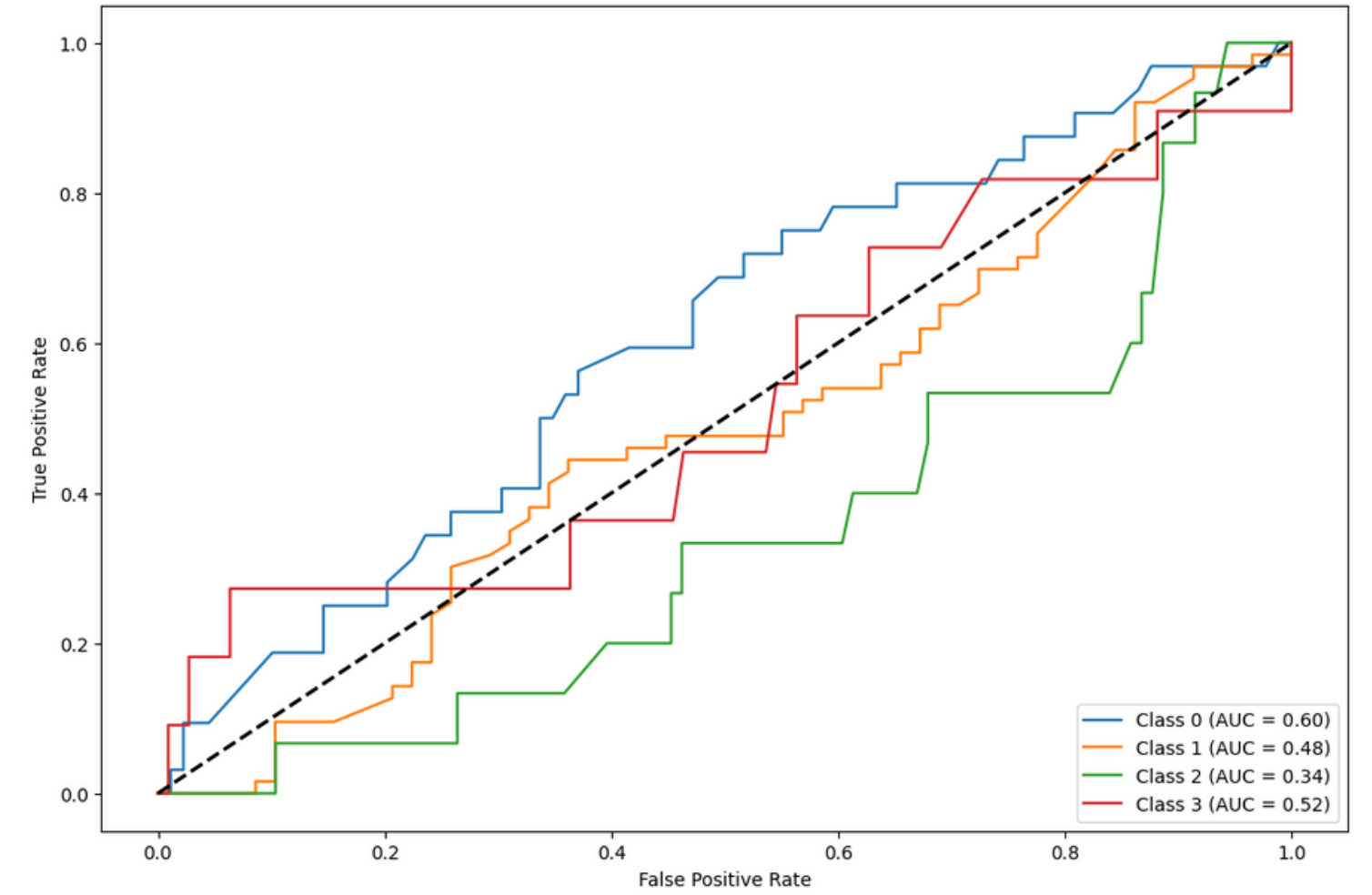
**Decision
Trees**

Random Forest Feature Importances



**Random
Forest**

ROC Curve for XGBoost



XGBoost

CONCLUSION!

In conclusion, this project provides a comprehensive understanding of customer behavior on e-commerce platforms, offering valuable insights that can drive strategic decision-making. By implementing the recommended strategies, businesses can not only enhance the user experience but also increase customer satisfaction, loyalty, and ultimately, revenue. As the e-commerce landscape continues to evolve, staying attuned to customer behavior is pivotal for maintaining a competitive edge in the market.



RECOMMENDATION!

Personalized Recommendations: Implement a robust recommendation engine based on user preferences and historical data to enhance the personalized shopping experience.

User Interface Optimization: Improve the user interface based on insights gained from the user journey analysis, making navigation more intuitive and user-friendly.



Targeted Marketing Campaigns: Develop targeted marketing campaigns tailored to specific customer segments, optimizing advertising efforts and increasing ROI.

Dynamic Pricing Strategies: Explore dynamic pricing models based on customer behavior, demand patterns, and competitor analysis.

Customer Engagement Initiatives: Introduce loyalty programs, special promotions, and interactive content to enhance customer engagement and retention.