

UNDERSTANDING ONLINE SHOPPPING BEHAVIOR

Using Machine Learning In SAS

Author

Dravin Poudyal



Affiliations

Wright State University

Introduction

More than a trend, online shopping has become a habit for people these days. People are more likely to purchase online rather than visit stores. The significant growth of e-commerce sites and apps has generated huge volumes of behavioral and transactional data, which gives us new opportunities to understand and predict the purchasing behavior of online shoppers. E-commerce/Online shopping creates a huge amount of data every day, from clicks to purchase, where the patterns are hidden, which can tell us about why some buy while others leave.

Methodology

Dataset: A shopping behavior dataset containing customer details such as gender, purchase frequency, purchase amount, and subscription status.

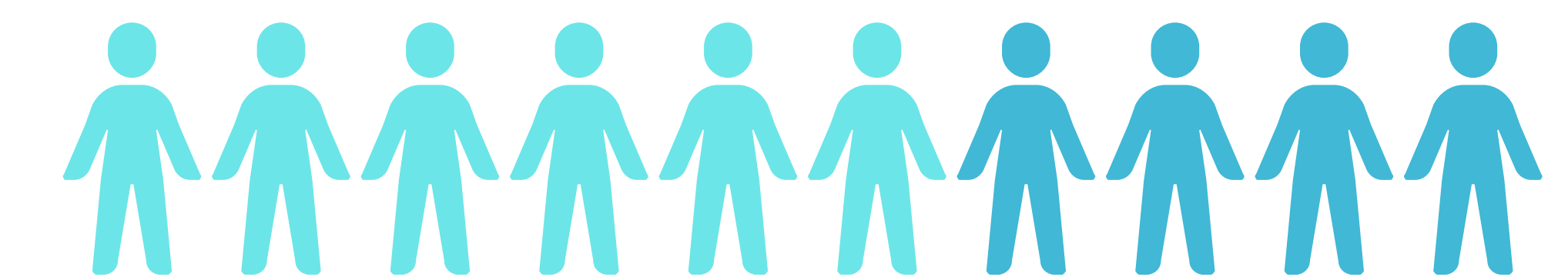
Tool Used: SAS Viya (SAS Studio, browser-based).

Steps:

- 1.Imported the dataset into SAS Viya.
- 2.Filtered records to include only male and female customers.
- 3.Used SAS procedures to calculate counts, averages, and percentages.
- 4.Final output in different Bar Graphs to show a clear visualization of data.

Analysis

- Average Purchase made by Male are higher than that of Female.
- Average amount spent by Female is slightly higher than that of Male.
- The result shows that 27% of Male have subscription while that of Female is 0%.



Results

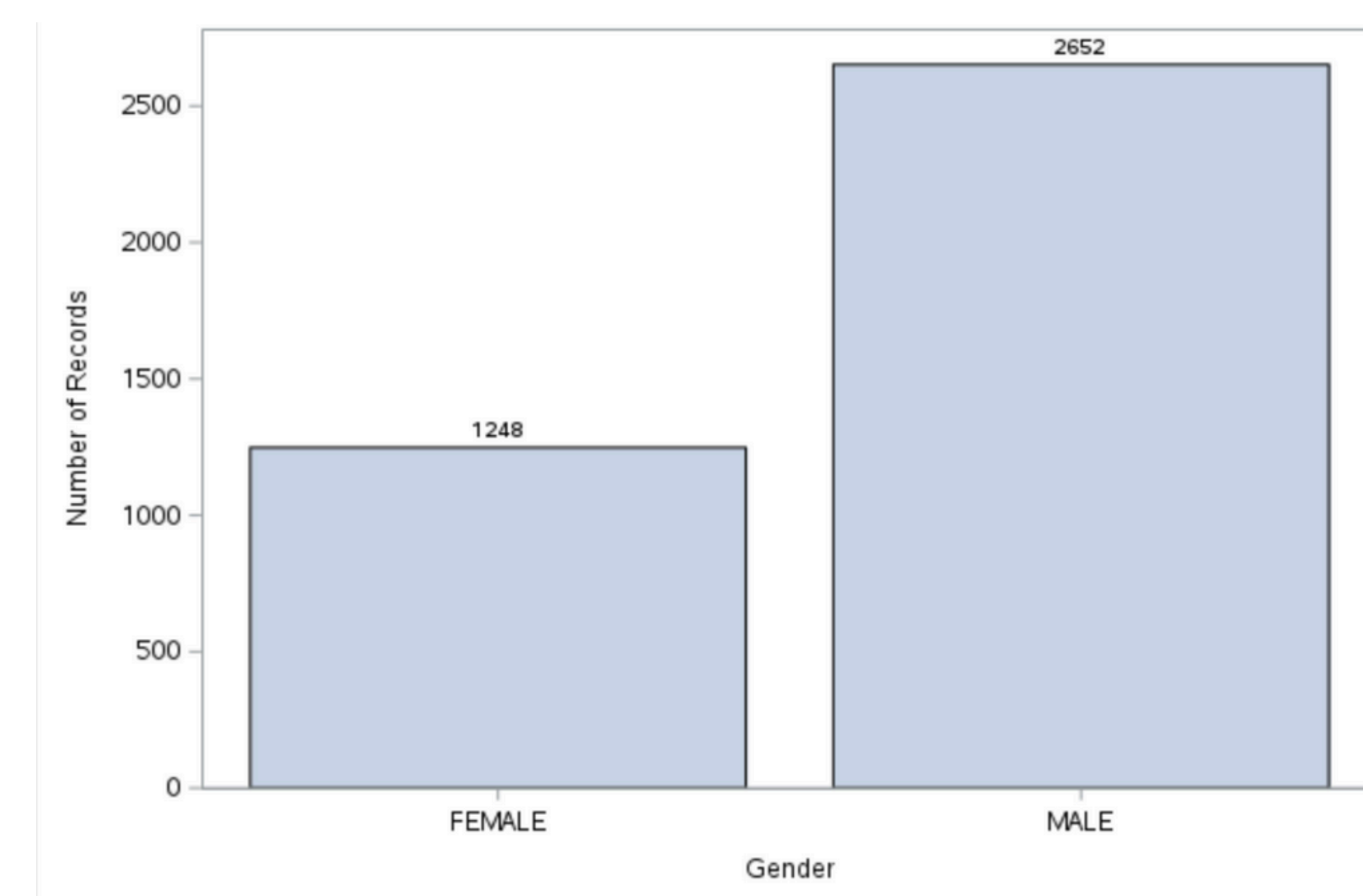


Fig: Number of Purchase by Female and Male

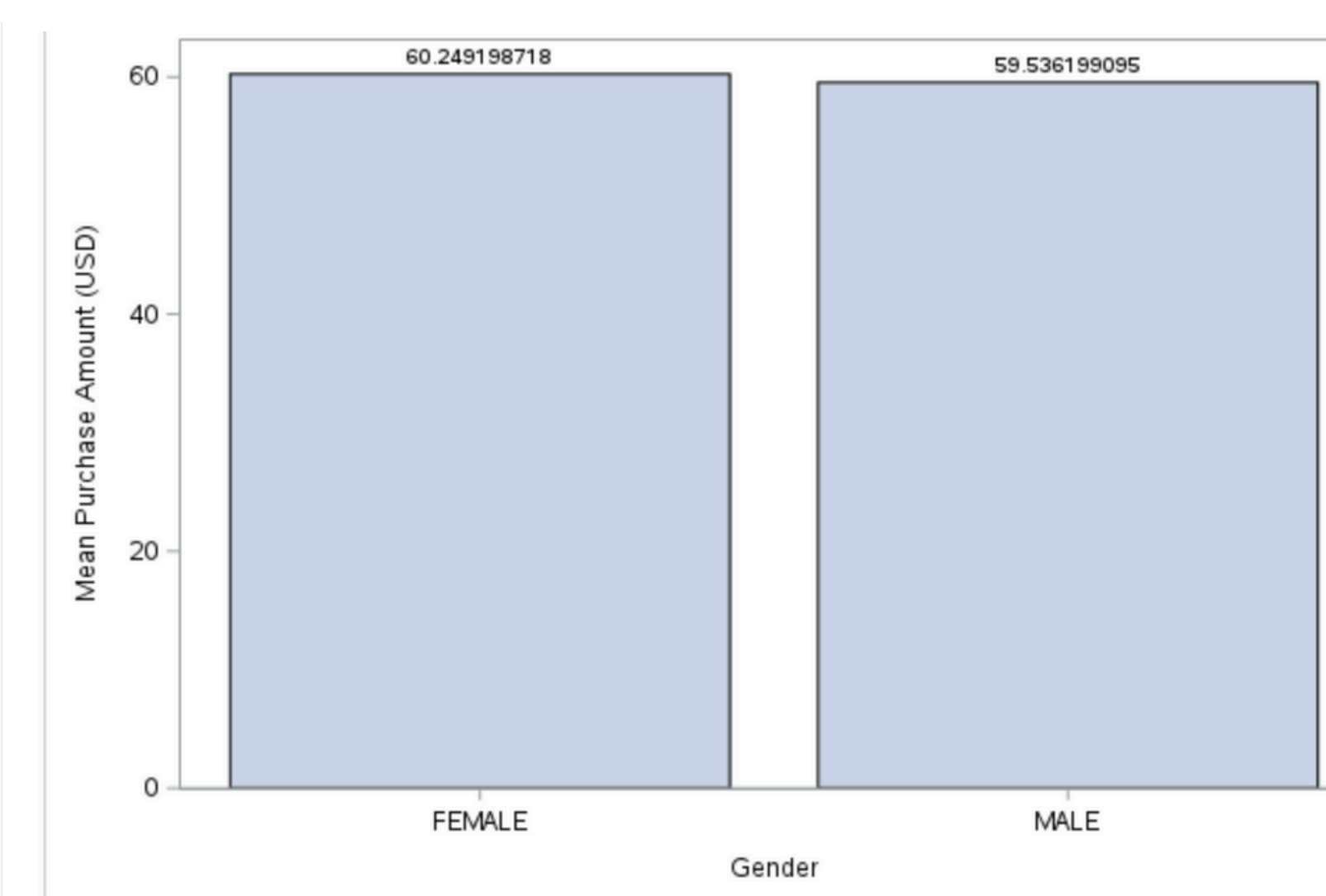


Fig: Avg amount spent by Female and Male

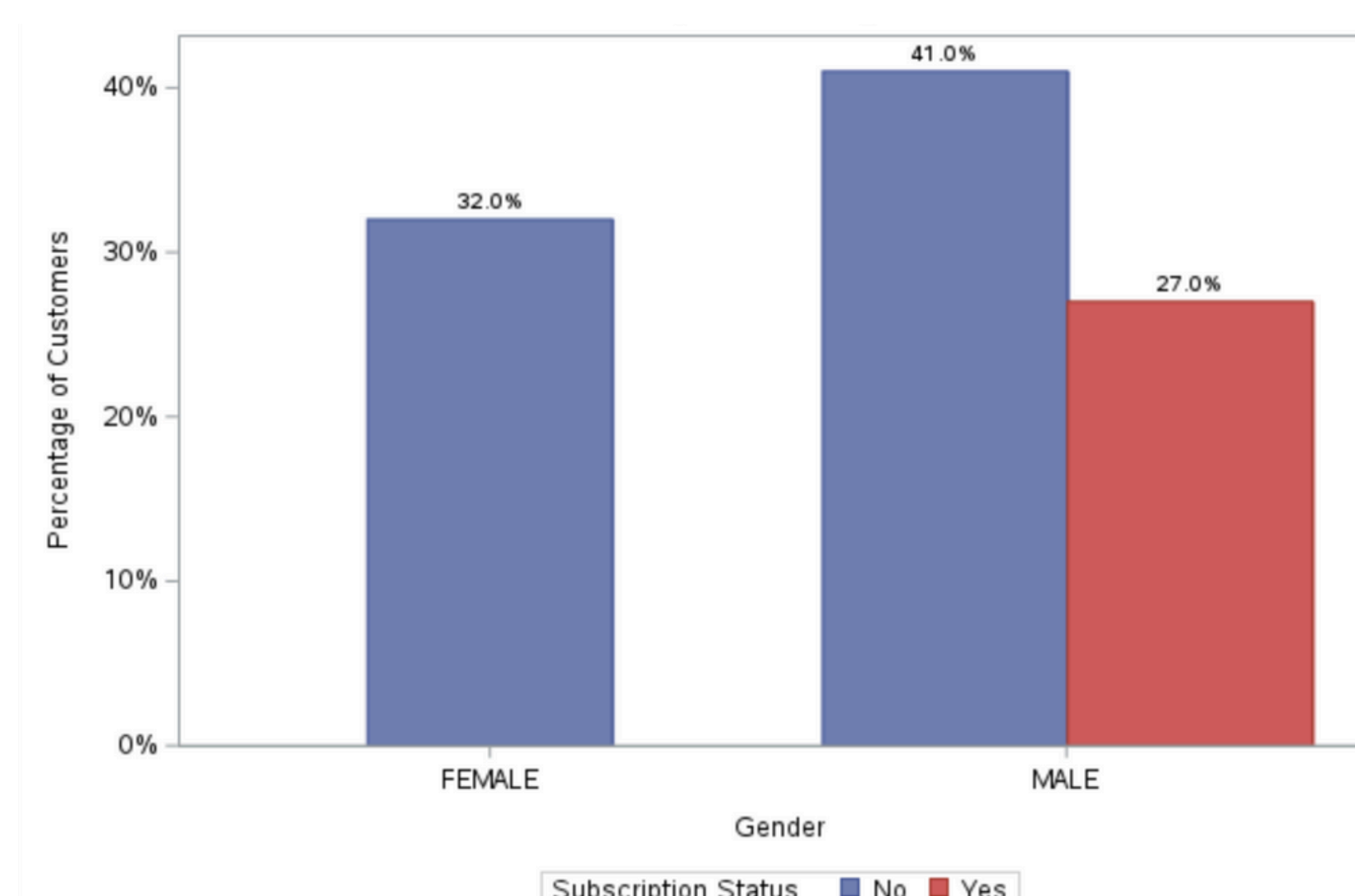


Fig: Subscription status by Female and Male

Conclusion

Results shows us that although the average purchase made by female is lower than that of male, female spend slightly more on online purchasing. Meanwhile males are more likely to subscribe than that of females. These insights provides framework to design gender sensitive marketing strategies. Business can leverage these findings to enhance their marketing strategy and strengthen customer retention.

Objective

In this presentation, we will be using a real-life dataset available on the internet and using SAS to predict the purchasing behavior of online shoppers on the basis of Gender.

Limitations

- The study only considers male and female category.
- The analysis is based on single dataset.
- The dataset is not equally distributed to male and female in terms of number.

Key Sources & Acknowledgements