Customer Segmentation Analysis – Project Summary

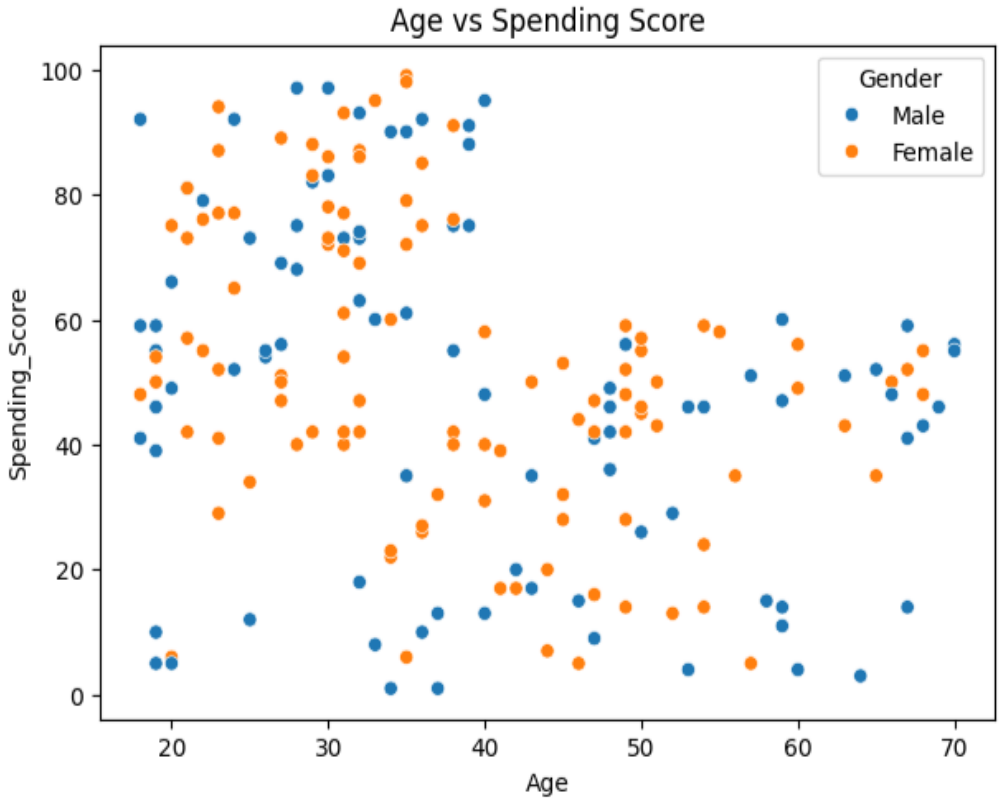
Why this project is important

This project is important for understanding customer behavior using simple and interview-friendly data analysis techniques. Instead of using complex machine learning models, this project focuses on bivariate analysis to identify spending patterns based on Age and Annual Income. Such analysis helps businesses make data-driven decisions in marketing and customer targeting.

Project Objectives

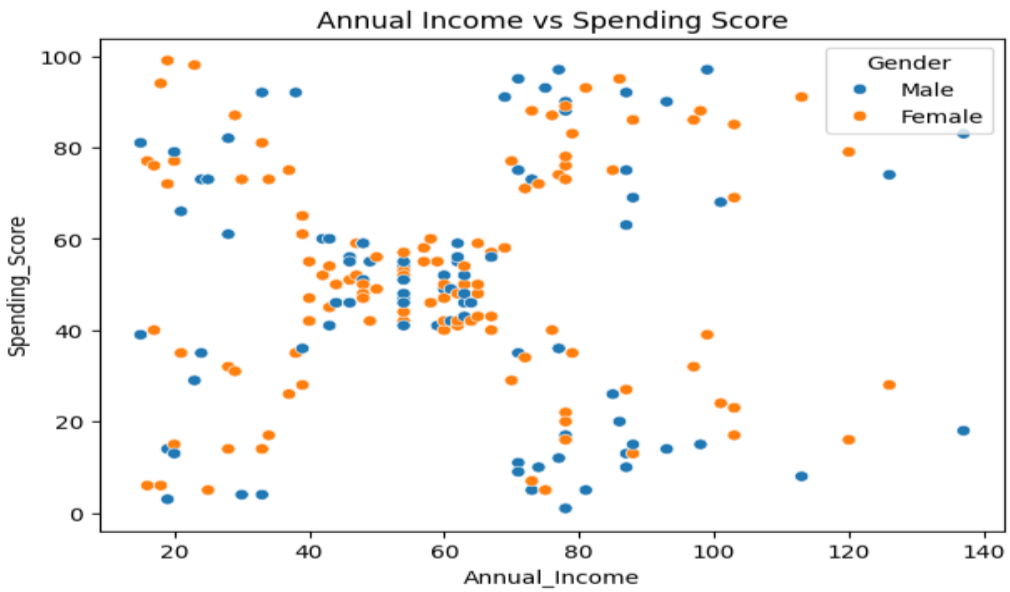
• Analyze the relationship between customer Age and Spending Score.
• Analyze how Annual Income affects customer Spending Score.
• Identify high-spending and low-spending customer groups using visual analysis.
• Create an interview-ready project that can be clearly explained without advanced ML concepts.

Important Graph 1: Age vs Spending Score



This graph represents the relationship between customer Age and Spending Score. It shows that younger and middle-aged customers generally have higher spending scores, while older customers tend to have lower spending scores. Gender-wise distribution shows similar spending behavior patterns among males and females.

Important Graph 2: Annual Income vs Spending Score



This graph shows how Annual Income impacts Spending Score. It clearly highlights different customer groups such as high-income low spenders, low-income high spenders, and balanced customers. This visualization helps businesses identify target customers for premium and budget-based marketing strategies.

Conclusion

This project successfully demonstrates customer segmentation using bivariate analysis. By focusing on Age, Income, and Spending Score, meaningful insights are derived without using advanced clustering algorithms. This makes the project easy to explain in interviews while still appearing practical and industry-relevant. The visual insights can directly support business decision-making and marketing strategies.