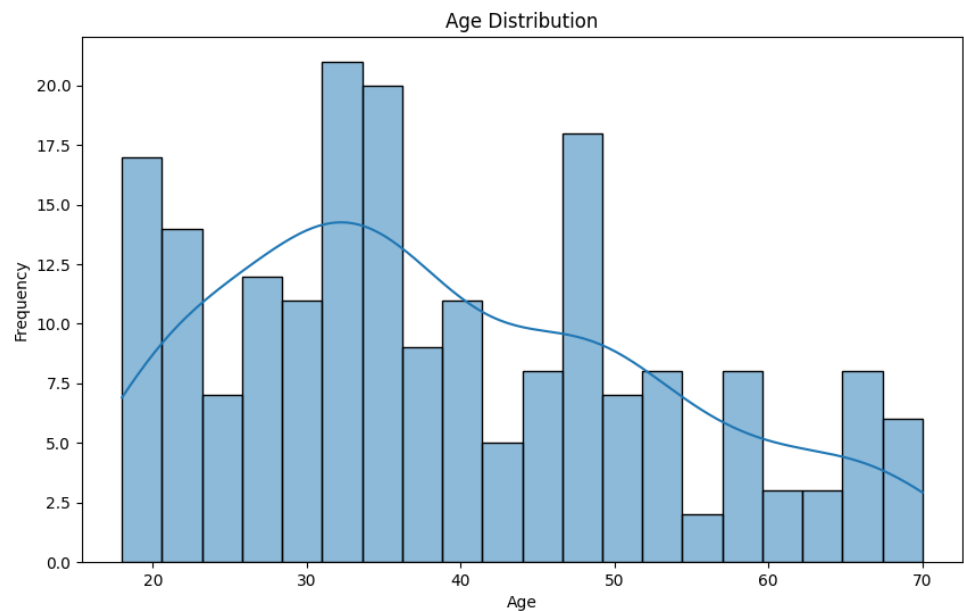


Customer Segmentation Statistical Analysis Report

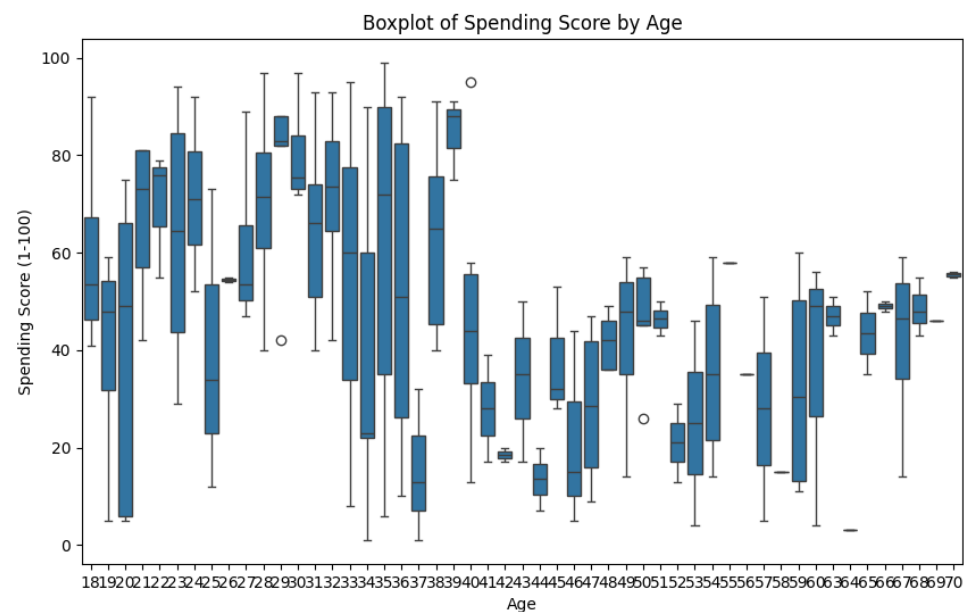
This report presents the findings from the statistical analysis performed on the customer segmentation dataset.

Visualizations

Distribution of Age



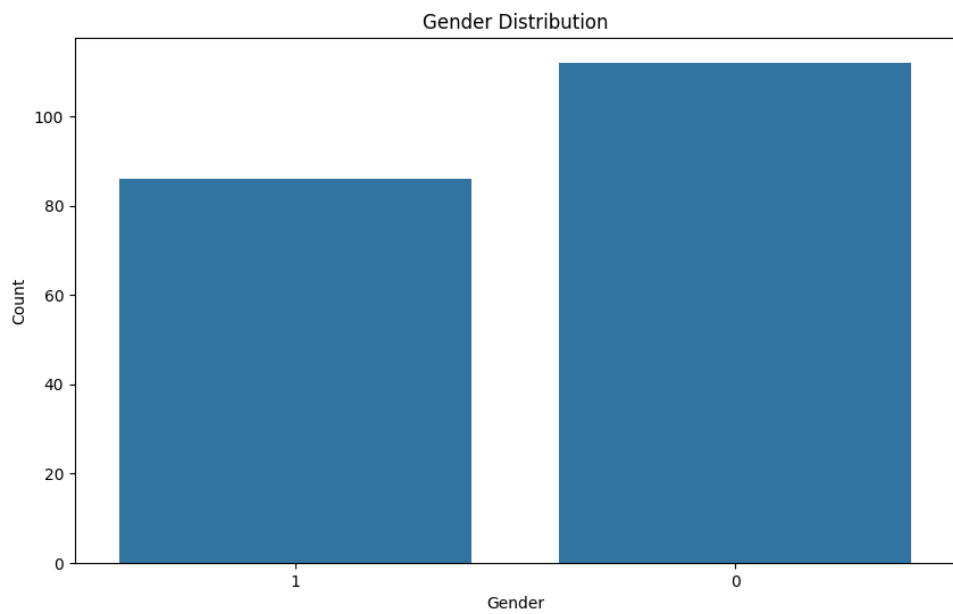
Boxplot of Spending Score by Age



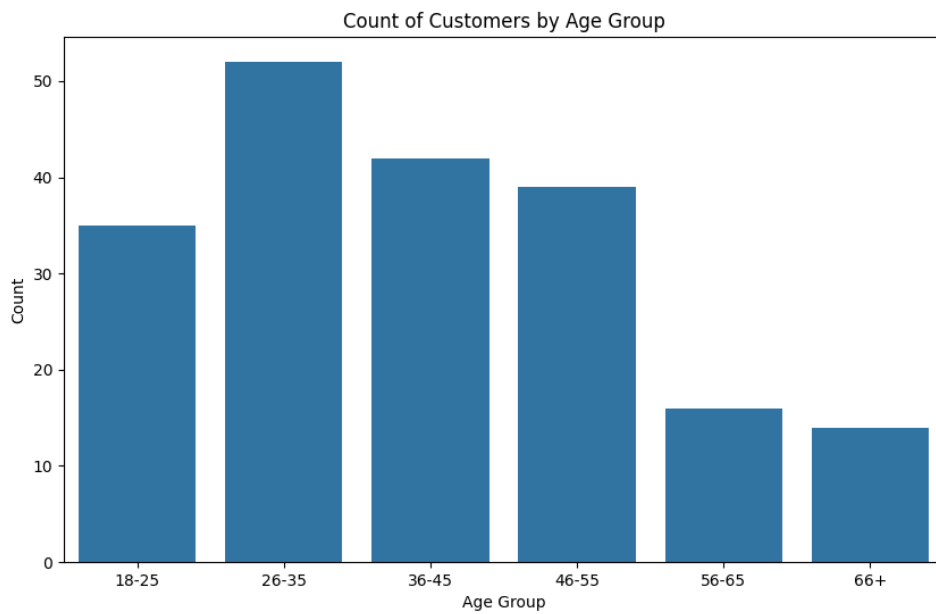
Scatter Plot: Annual Income vs. Spending Score



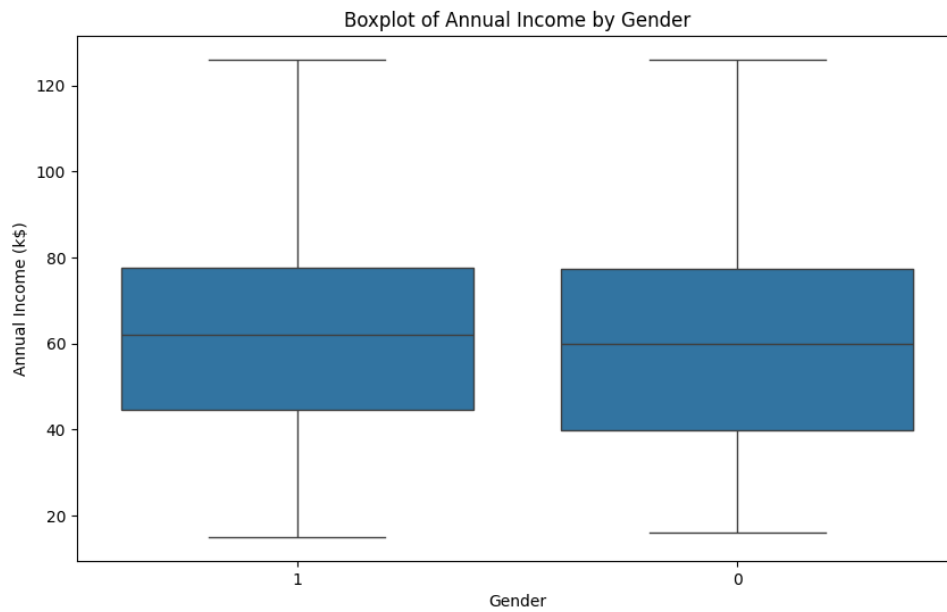
Gender Distribution



Count of Customers by Age Group



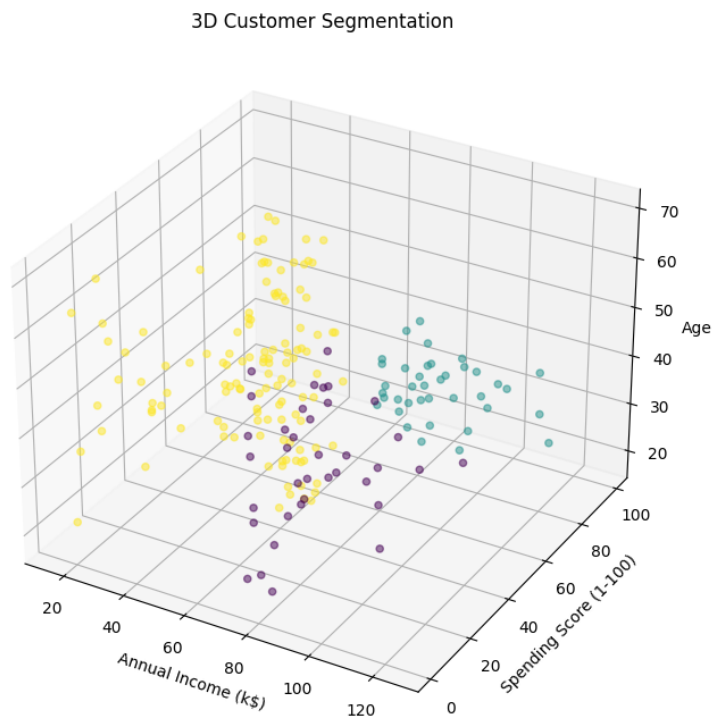
Boxplot of Annual Income by Gender



Customer Segmentation (2D)



Customer Segmentation (3D)



Statistical Analysis Results

Mean of Age: 38.93

Standard Deviation of Age: 14.02

T-Test t-statistic: 0.11

T-Test p-value: 0.91

Correlation between Annual Income and Spending Score: 0.01

Linear Regression Coefficient: 0.01

Linear Regression Intercept: 49.58

Insights and Conclusions

1. The customer age distribution shows that the majority of customers fall within the age groups of 25-35 and 35-45.
2. The spending score distribution indicates that a significant portion of customers has a high spending score (above 70).
3. There is a positive correlation between annual income and spending score.
4. The gender distribution shows a fairly balanced ratio between male and female customers.
5. The KMeans clustering has successfully identified three distinct customer segments.