Credit Card Consumption

An Analysis of customers with credit cards from Banking Plus

Objectives and Hypothesis

What is the Data?
- Banking Plus has provided a dataset to find insights on customers with credit cards with the bank
- Dataset contains general customer information and quantitative data

What is the Hypothesis?
- To identify any significant difference in income between males and females
- Null hypothesis states there is not a significant difference

What is the Objective?
- Determine the main contributing factor to income based on gender

What other objectives are there?
- Testing for income based on other factors such as education level

Analysis on Income and Gender

Income Category

Females
+ $40k – $60k
+ Less than $40k

Unknowns

Males
+ $120k +
+ $80k – $120k
+ $60k – $80k
+ $40k – $60k
+ Less than $40k

Observations

Population
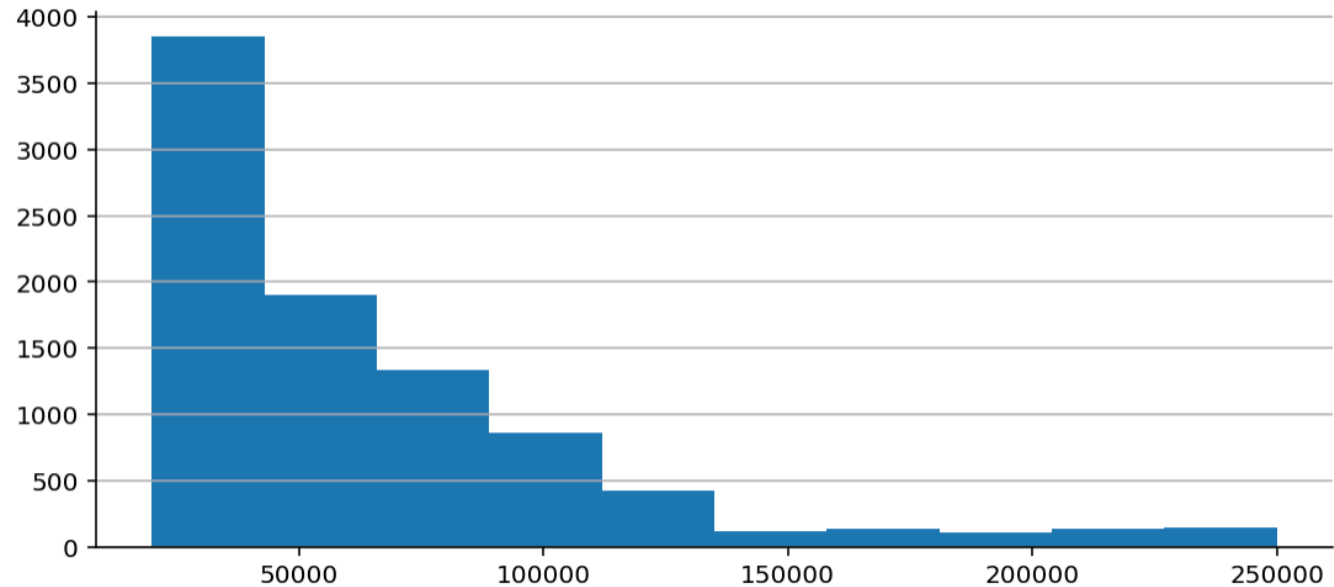+ Females: 5,300
+ Males: 4,700
+ Total: 10,000

Average Income

Females
+ $35,000

Males
+ $92,000

+ **Two Times the Income**
+ **Contrast in Categories**
+ **Most with Less Income**

Testing the Hypothesis

What is the Hypothesis?

- To identify any significant difference in income between males and females

- Null hypothesis states there is not a significant difference

Distribution of Income

- **Two sample t-Test results indicate there is a significant difference**

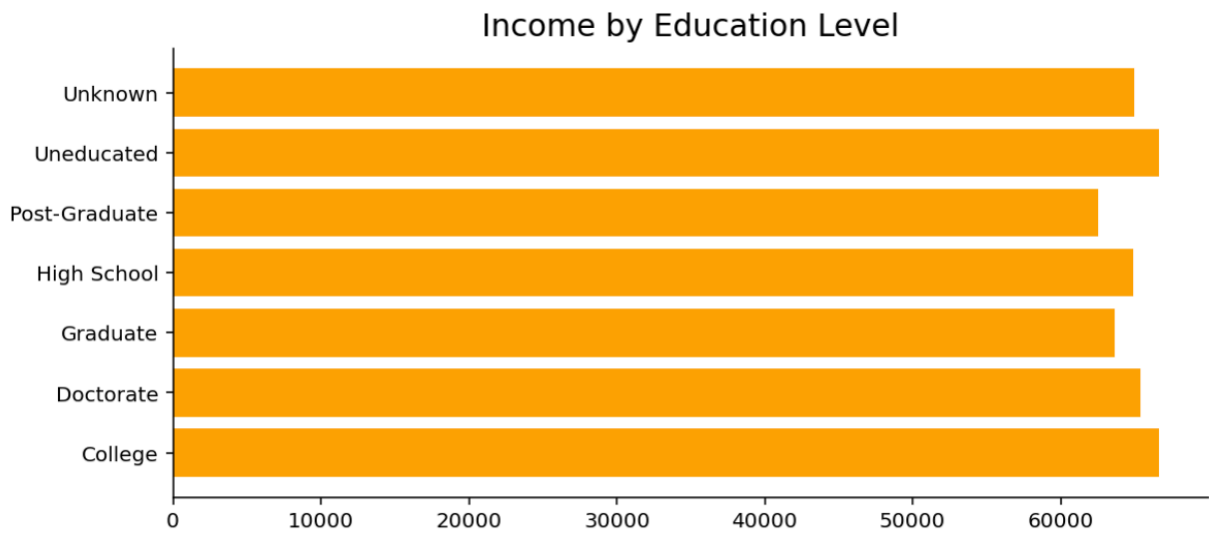- **High range for skewness and kurtosis**

Group Comparisons

Age Group

Income by Customer Age

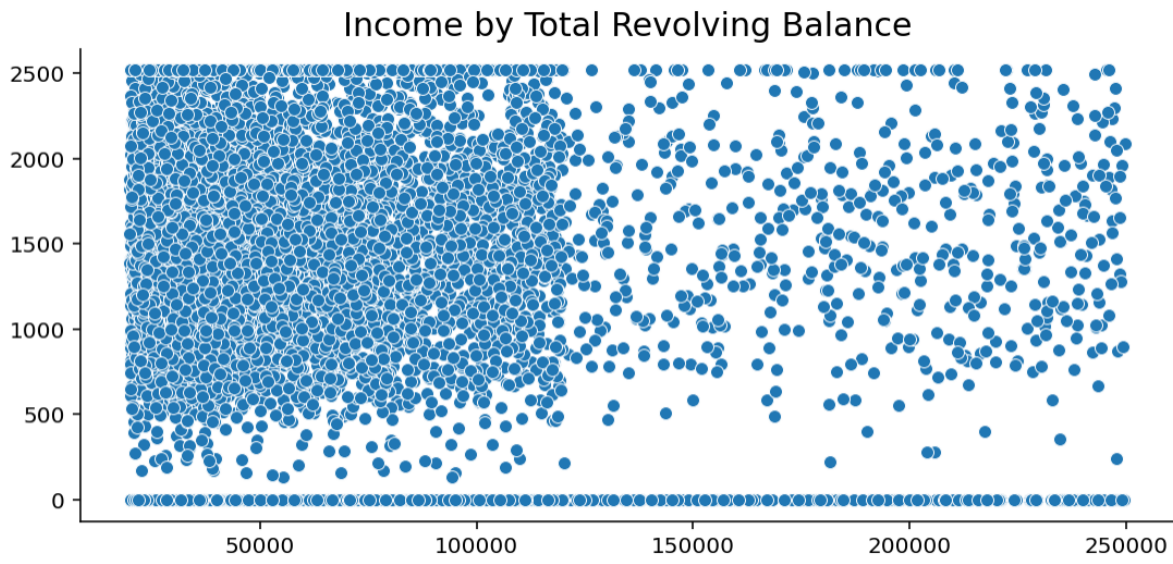- ✛ Range of ages for Males and Females

- ✛ Males earn higher income

Group Comparisons
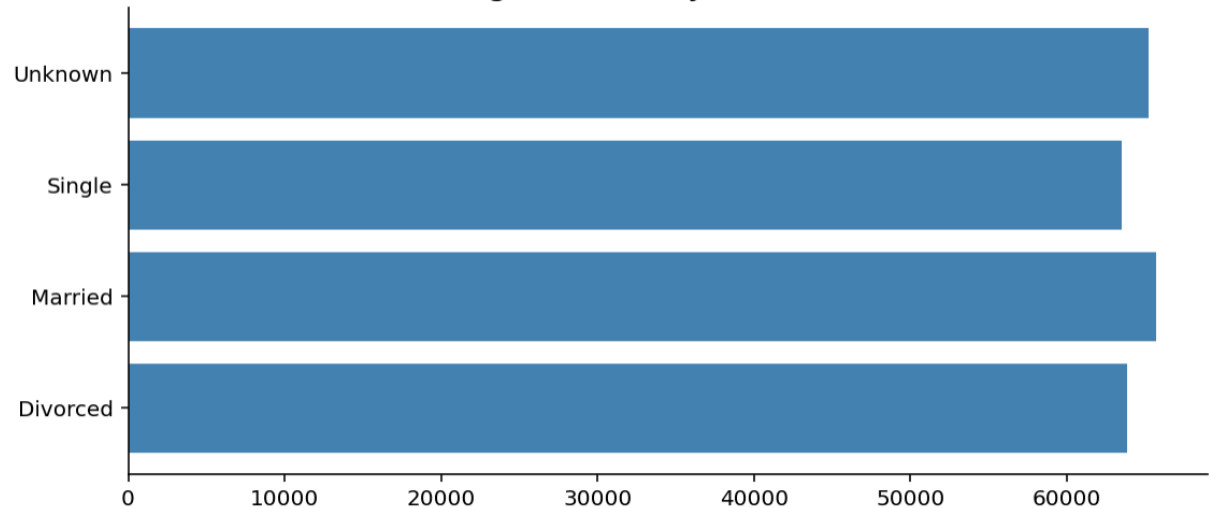
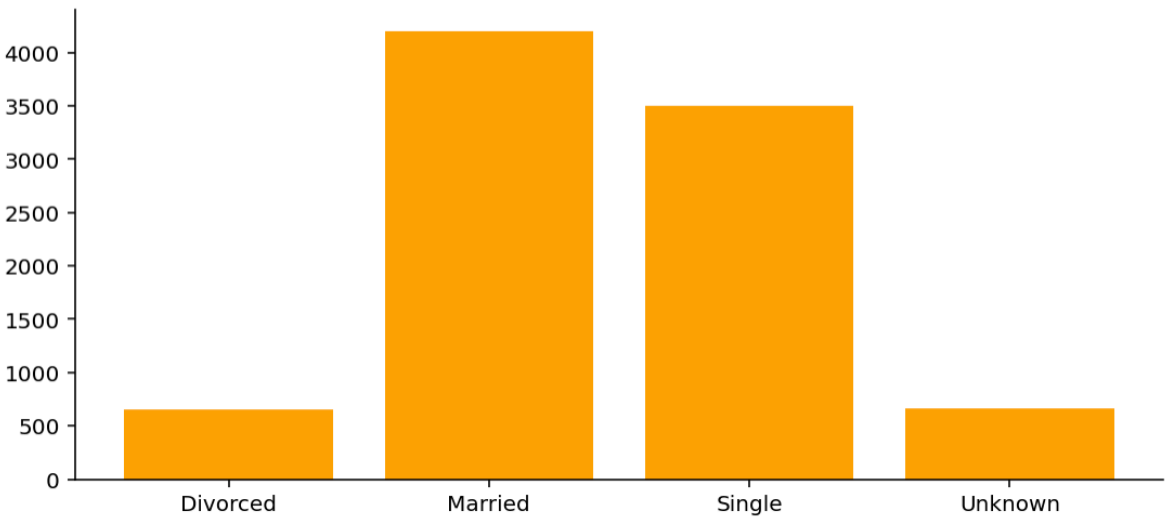Income by Education Level

Income by Total Revolving Balance

Group Comparisons

Marital Status Group

Average Income by Marital Status

Marital Status

Group Comparisons

Dependents Group
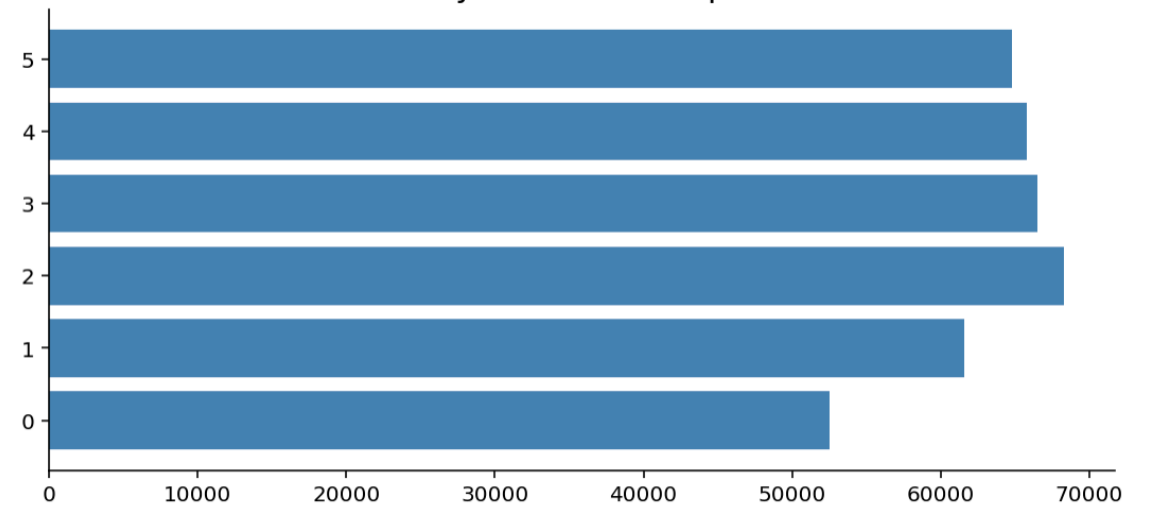
Tests Results

What can we conclude?

+ The age of Males and Females are primarily spread from late 20s to mid-60's.

+ **Males earn higher income across different ages.**

+ The average income for all customers in different educational levels are above 60,000.

+ There is a significant correlation between Income and Total Revolving Balance.

+ There is a larger group of customers with incomes lower than 150,000 and that have high revolving balances.

+ **Income is not affected by marital status and remains above 60,000.**

+ **There are more married customers with credit cards than any other group.**

+ **There is a decrease in income where customers have 1 or no dependents.**

+ There are more customers with 2-3 dependents.

+ There is no effect on income if customers have 3 or more dependents.

Tests Results

Recommendations

+ Restructure the hiring process

+ Hold more conferences or meetings with employees

+ Opportunity for the company to review certain practices

Limitations

+ Factors employees understand is out of their control

+ Limited in aggregations

Discussions

Questions & Answers