



Data Glacier

Your Deep Learning Partner

Cross Selling Project

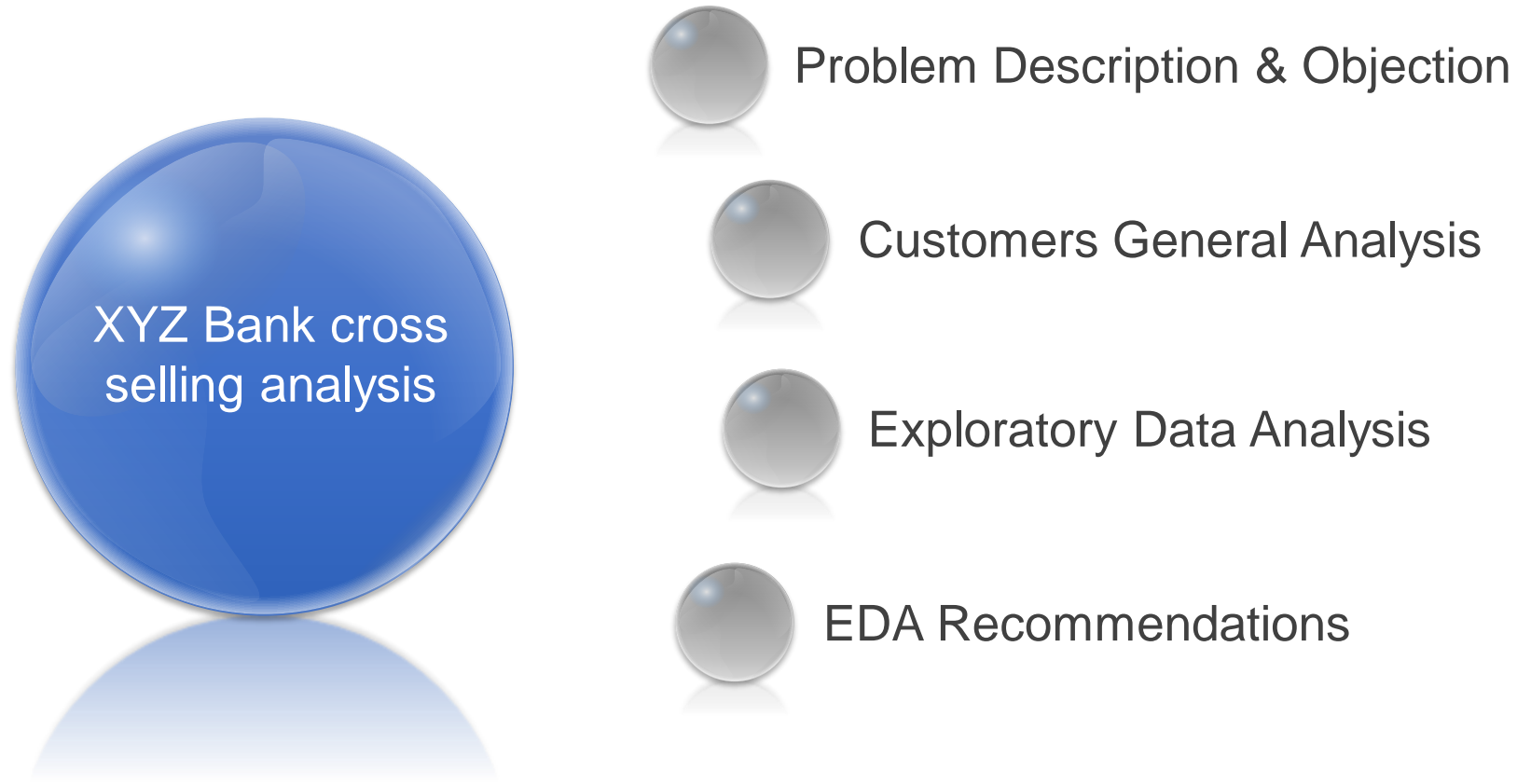
Virtual Internship: Final Presentation of Final Project

Group Name: Solo

Group Members: Abdullah GÖK (Turkey)

Date: 18-June-2022

Data Glacier Internship Final Project



Problem description

❑ General Overview

XYZ Credit Union in Latin America is performing very well in selling the Banking products (eg: Credit card, deposit account, retirement account, safe deposit box etc) but their existing customer is not buying more than 1 product which means bank is not performing good in cross selling (Bank is not able to sell their other offerings to existing customer). XYZ Credit Union decided to approach ABC Analytics to solve their problem.

❑ Problem

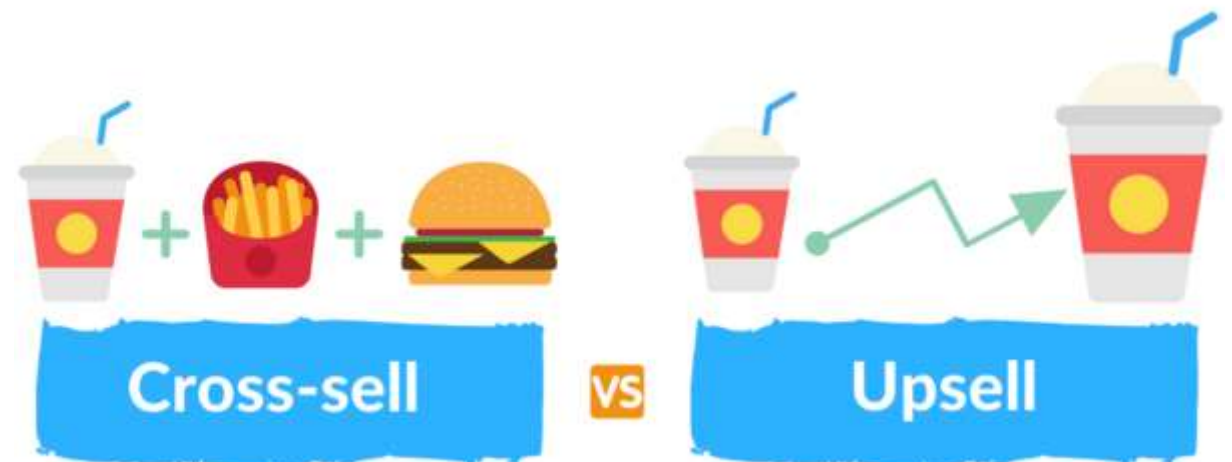
XYZ Credit Union is performing very well in selling the Banking products but is not performing good in cross selling.

❑ Objective

Find important features of customers , investigate them for solving the issue and visualize the findings.

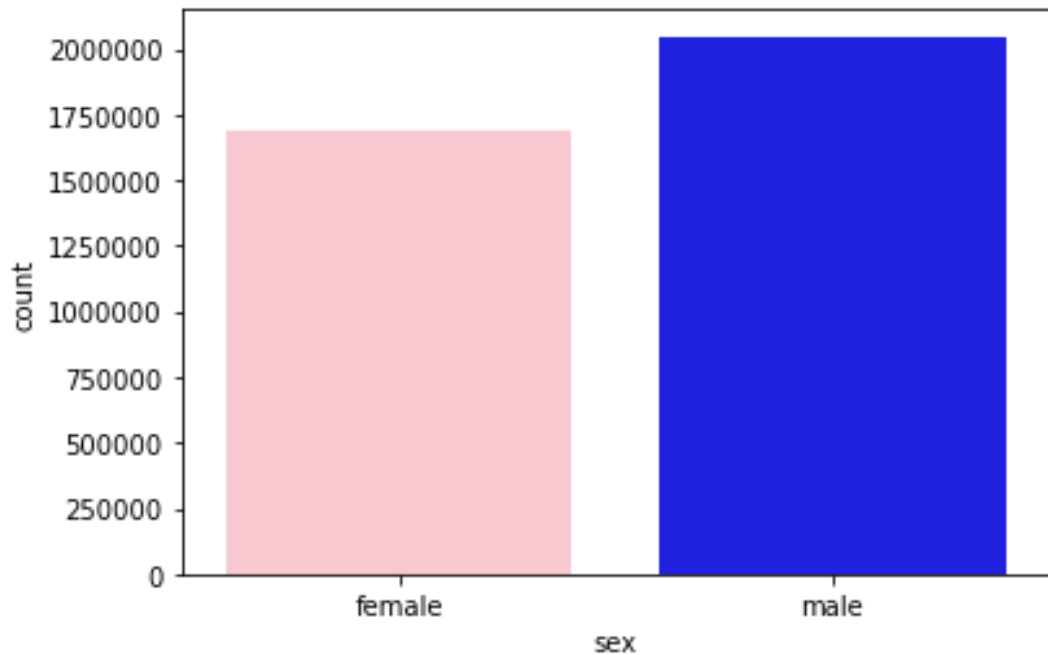
❑ The analysis has been divided into several parts:

- Data Understanding
- Data Cleaning
- Data insights, EDA and Visualization
- Recommendations

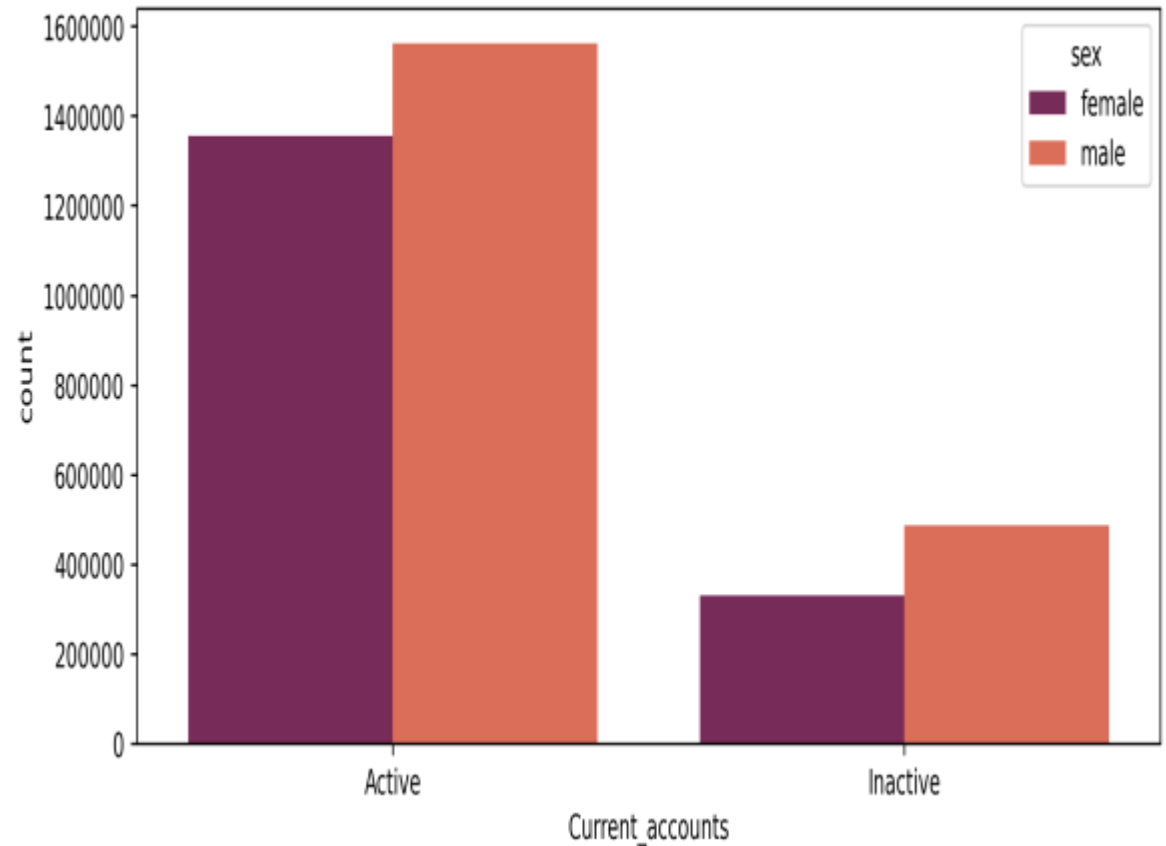


Customers General Analysis

- Gender Analysis



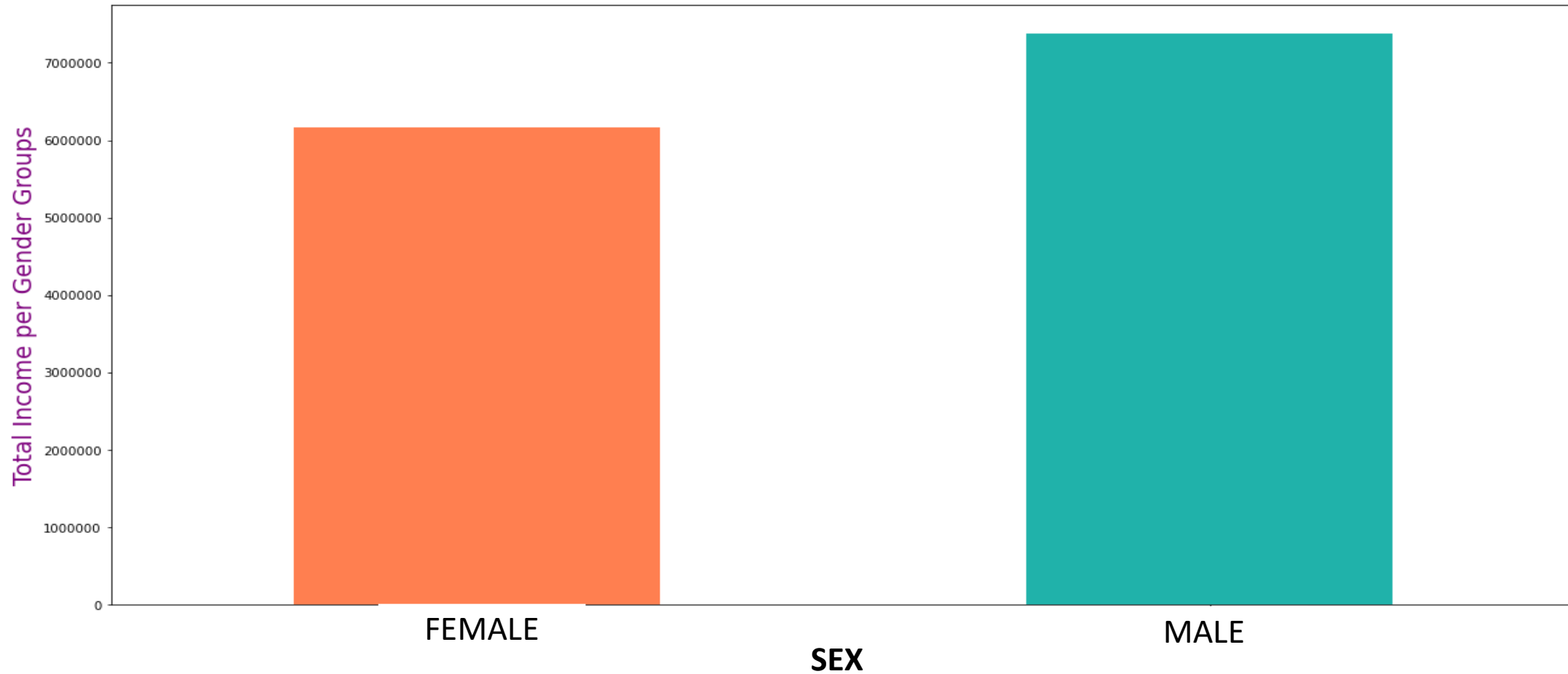
- Distribution of Bank's customers by Gender



- Current Accounts vs Gender

Customers General Analysis

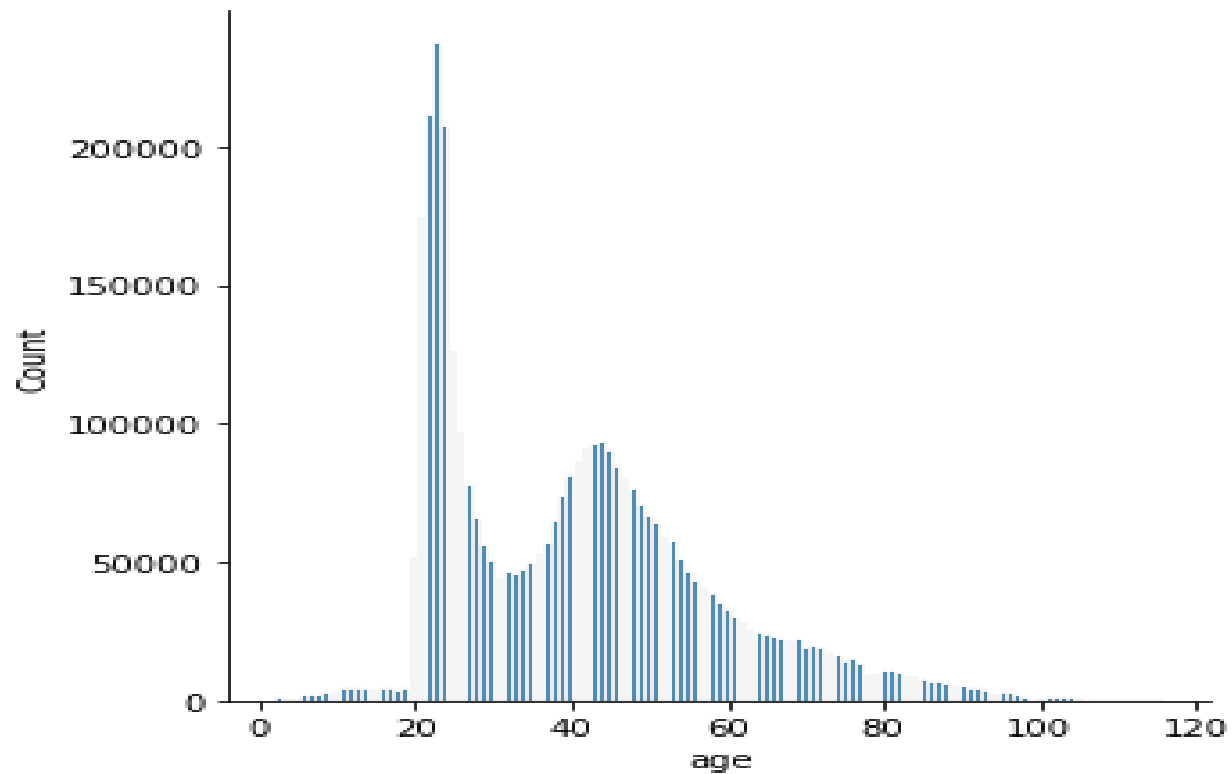
- Gender Analysis



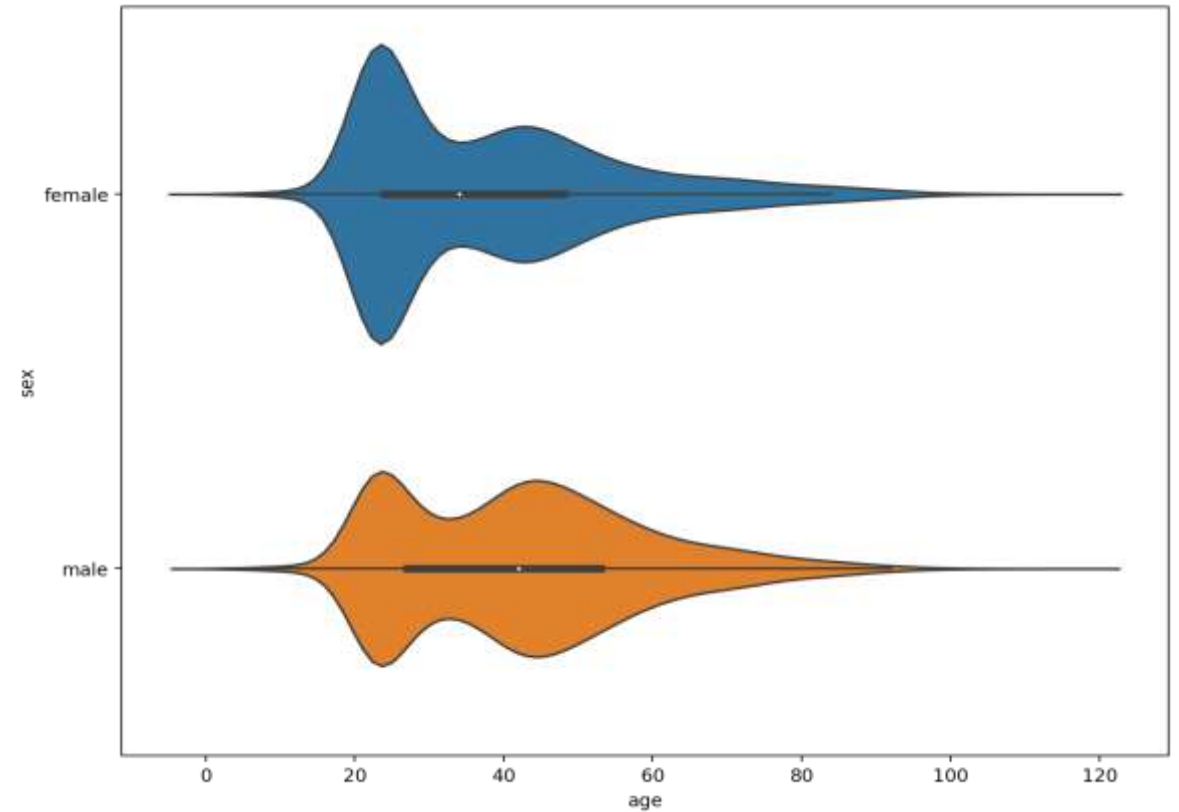
- Total Income per Gender

Customers General Analysis

- Age Analysis



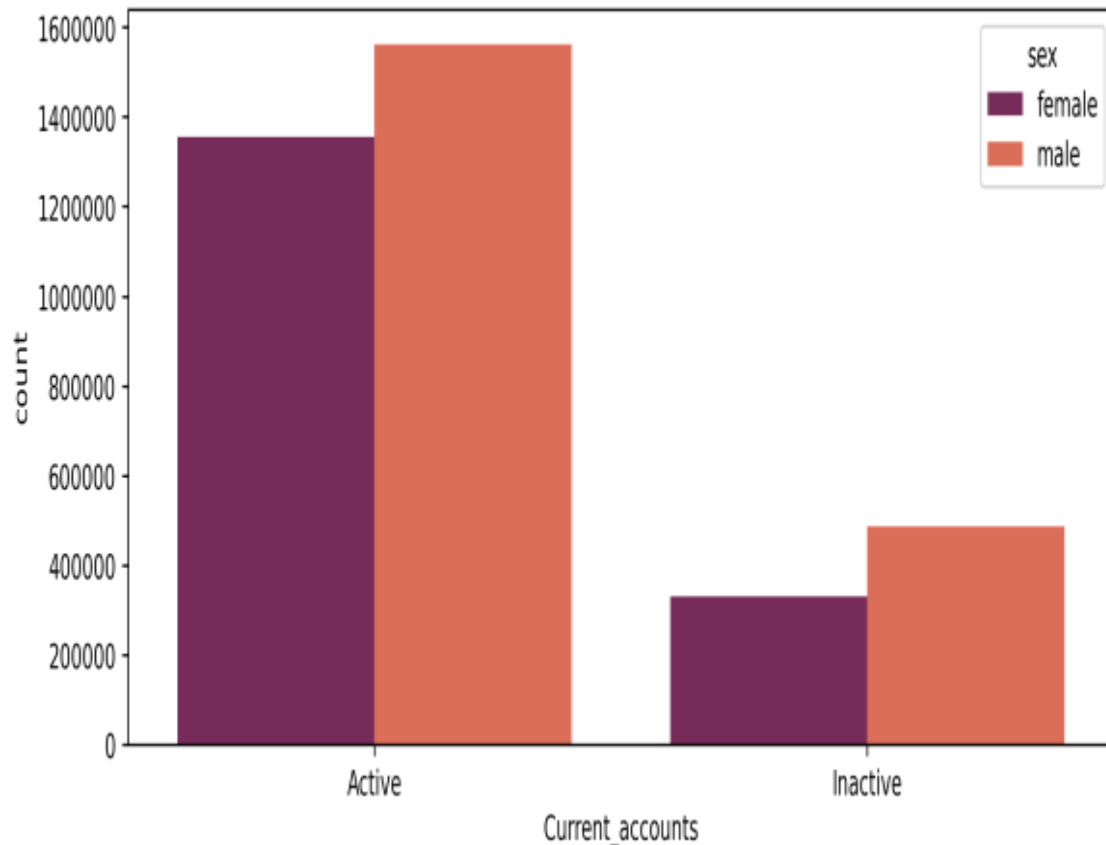
- Distribution of Bank's customers by age



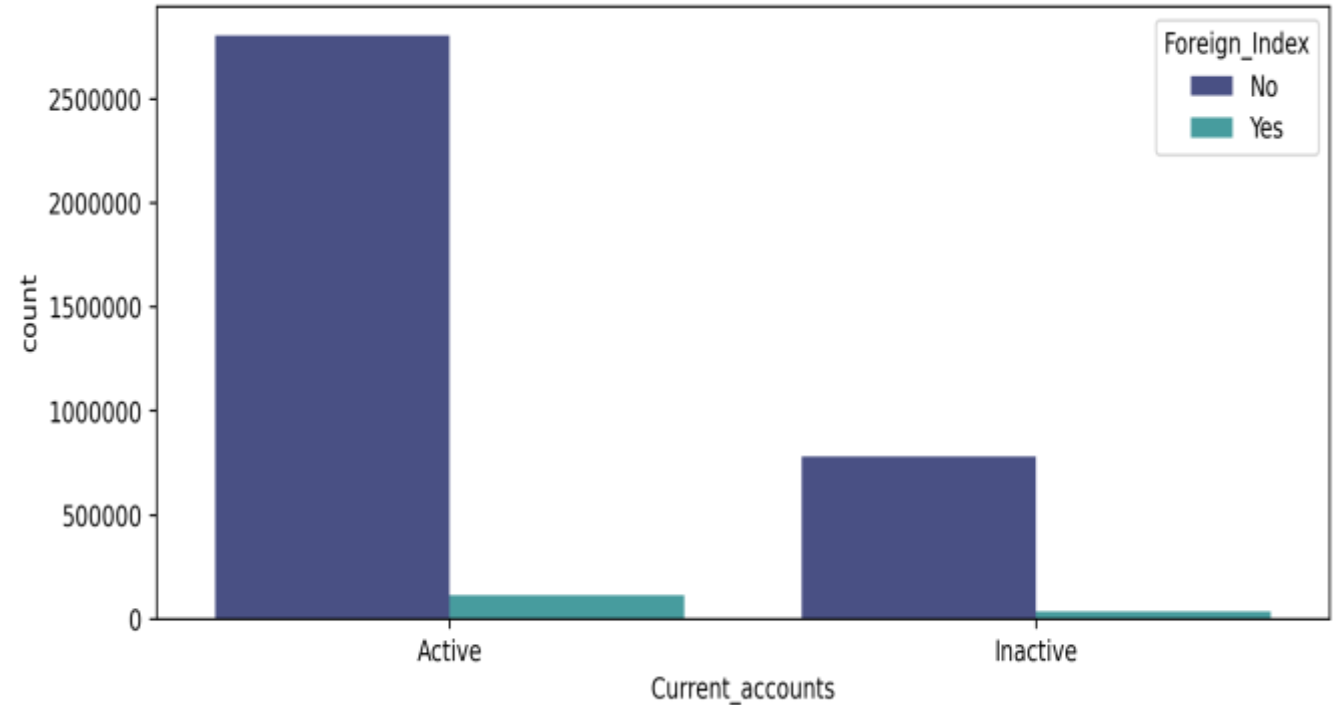
- Gender Density by Age

Customers General Analysis

- Current Accounts Analysis



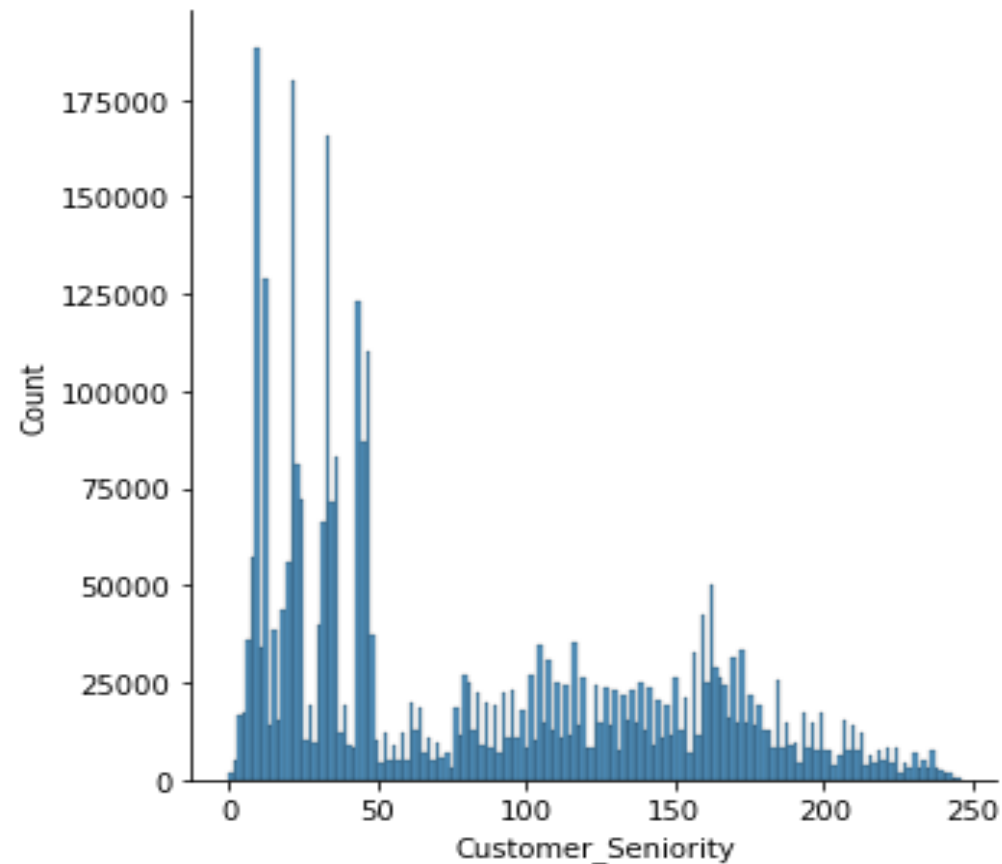
- Current Accounts vs Gender



- Current Accounts vs. Foreign Index

Customers General Analysis

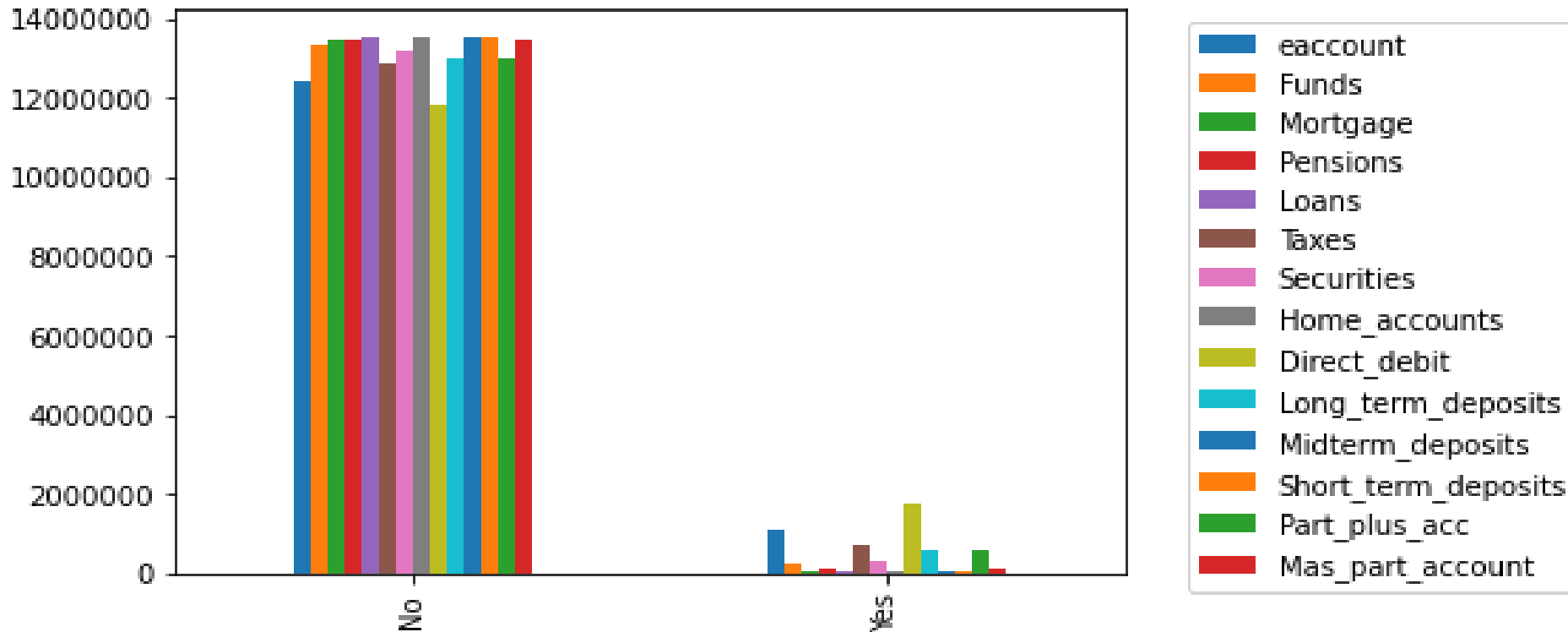
- Seniority Analysis



- Customer Seniority Distribution

Exploratory Data Analysis-Cross Sales

- Product Analysis



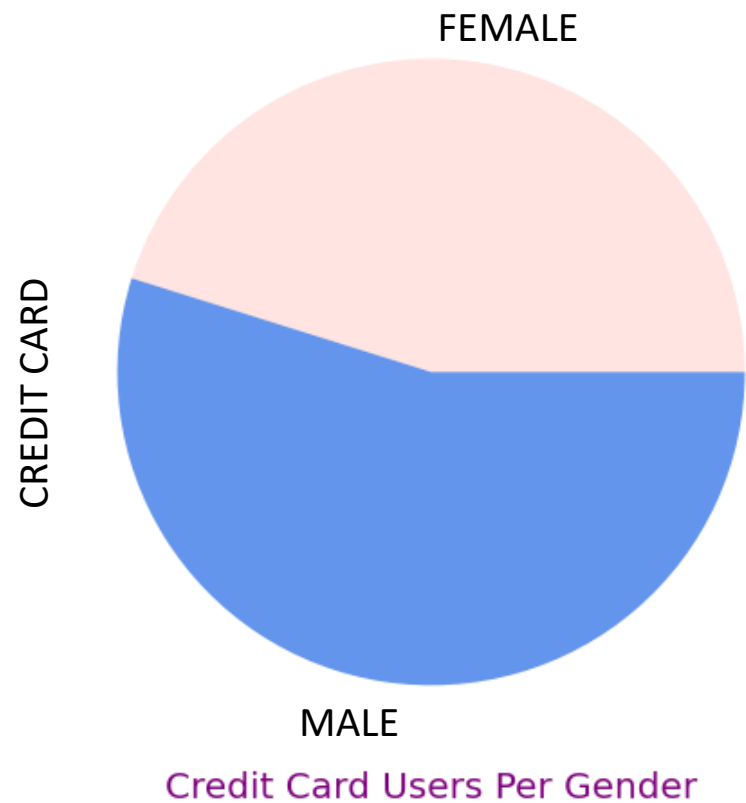
- Cross selling products current overview

Top 3 Cross Sold Products:

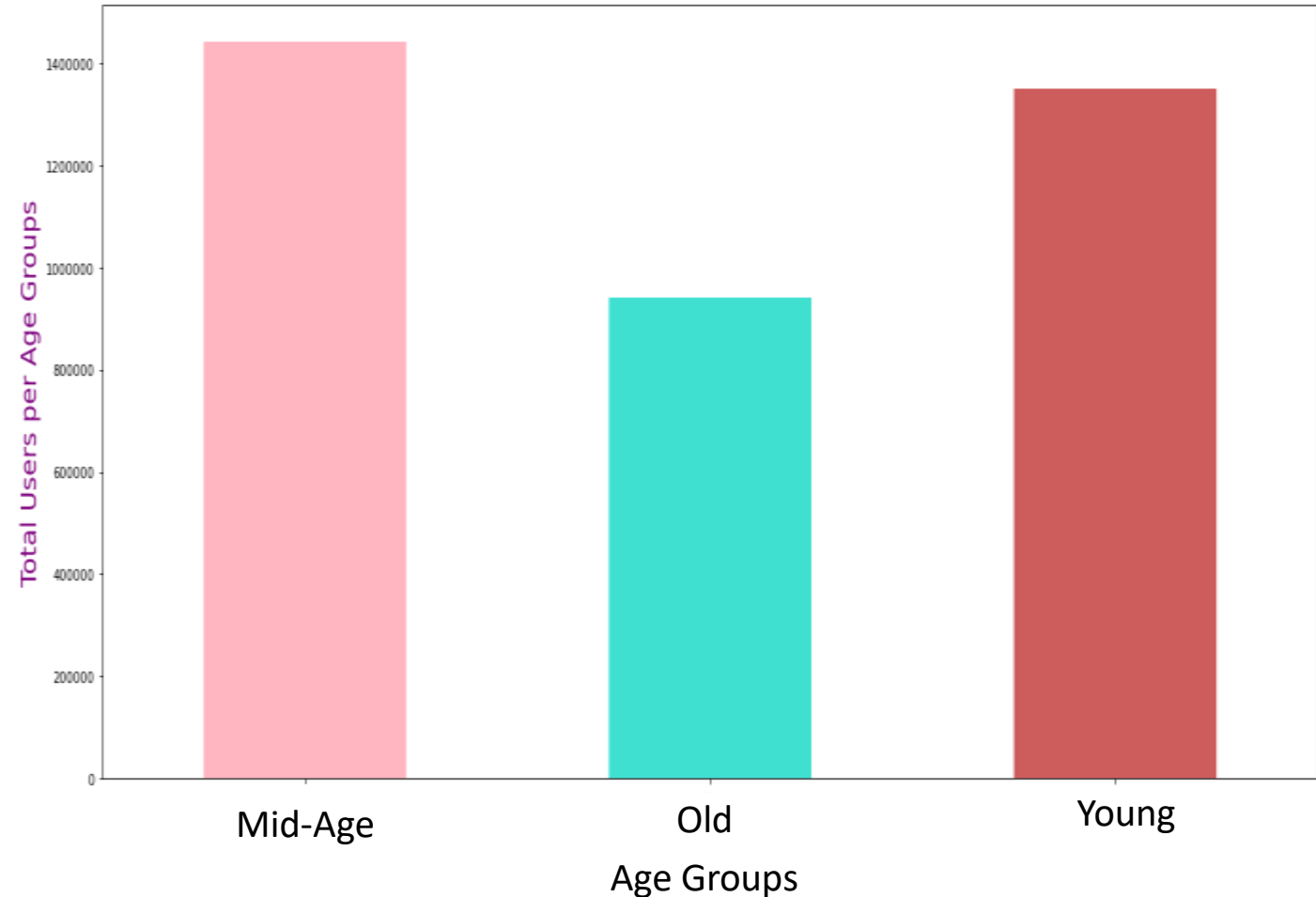
- Direct Debit
- eaccount
- Mortgage

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Credit Card



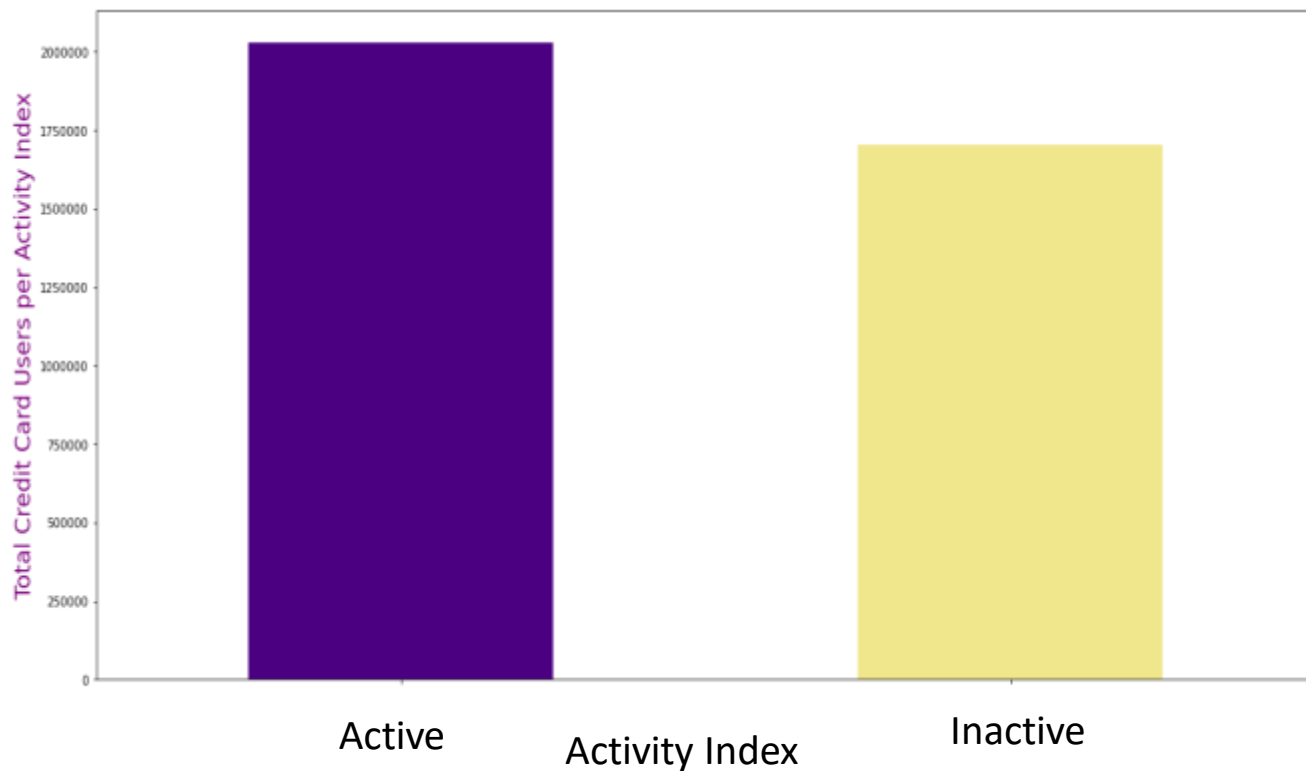
- Credit Card vs Gender



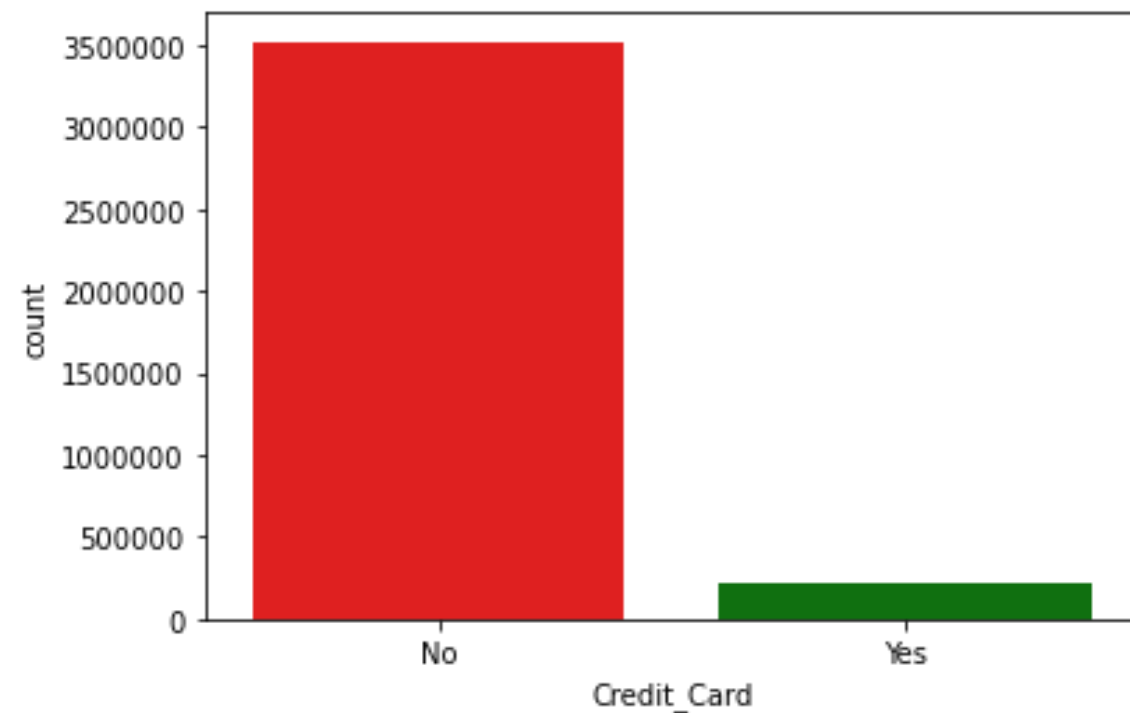
- Credit Card vs Age Groups

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Credit Card



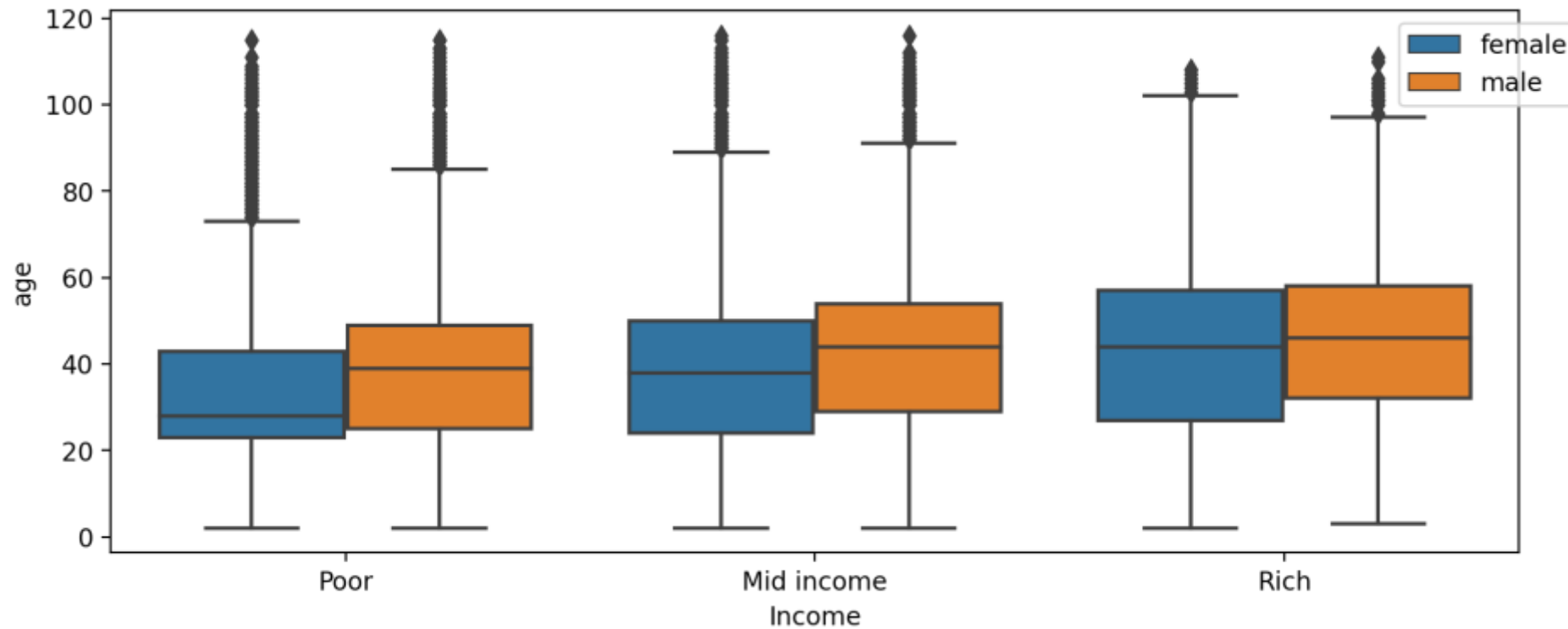
- Activity Index of Credit Card Users



- Total Credit Card Users

Exploratory Data Analysis-Cross Sales

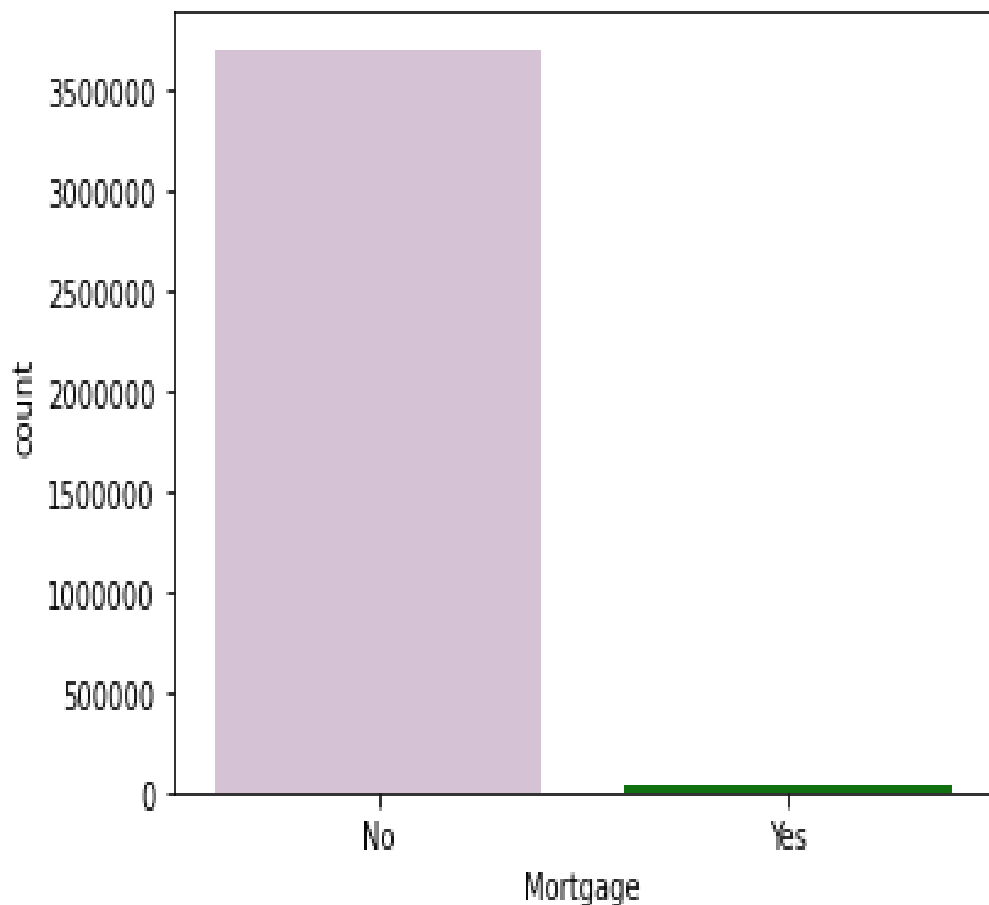
- Product Analysis in Detail: Credit Card



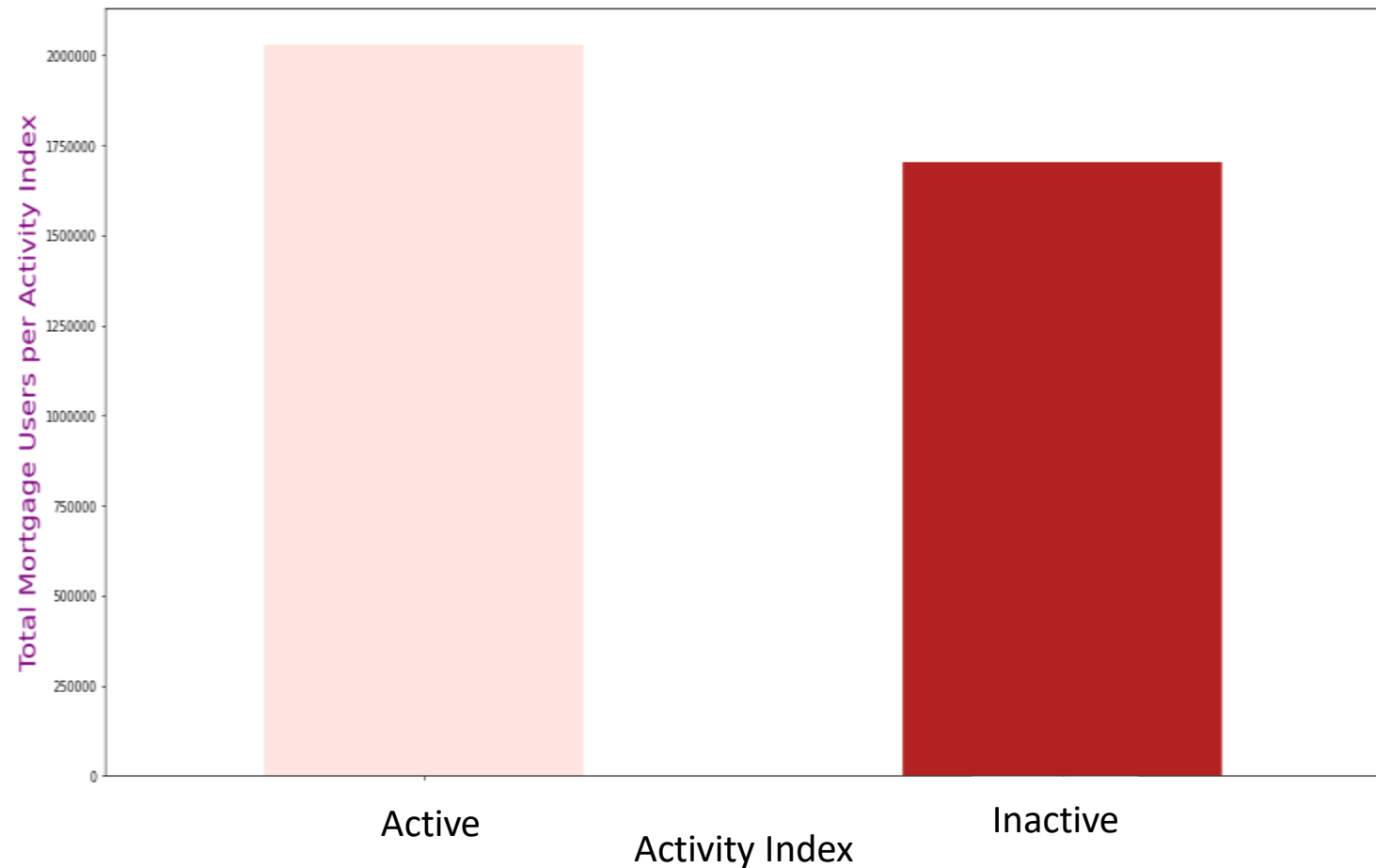
- Total Card users vs gender and age

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Mortgage



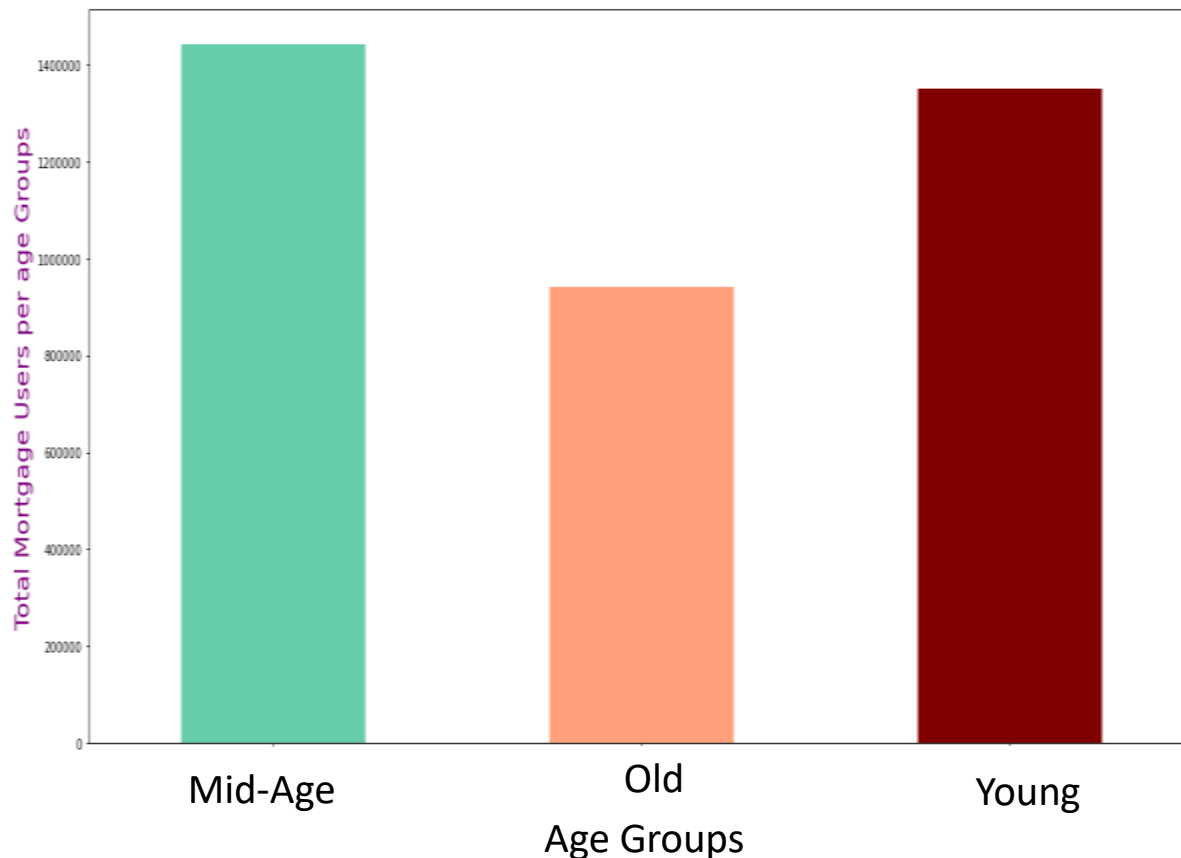
- Total Mortgage Users



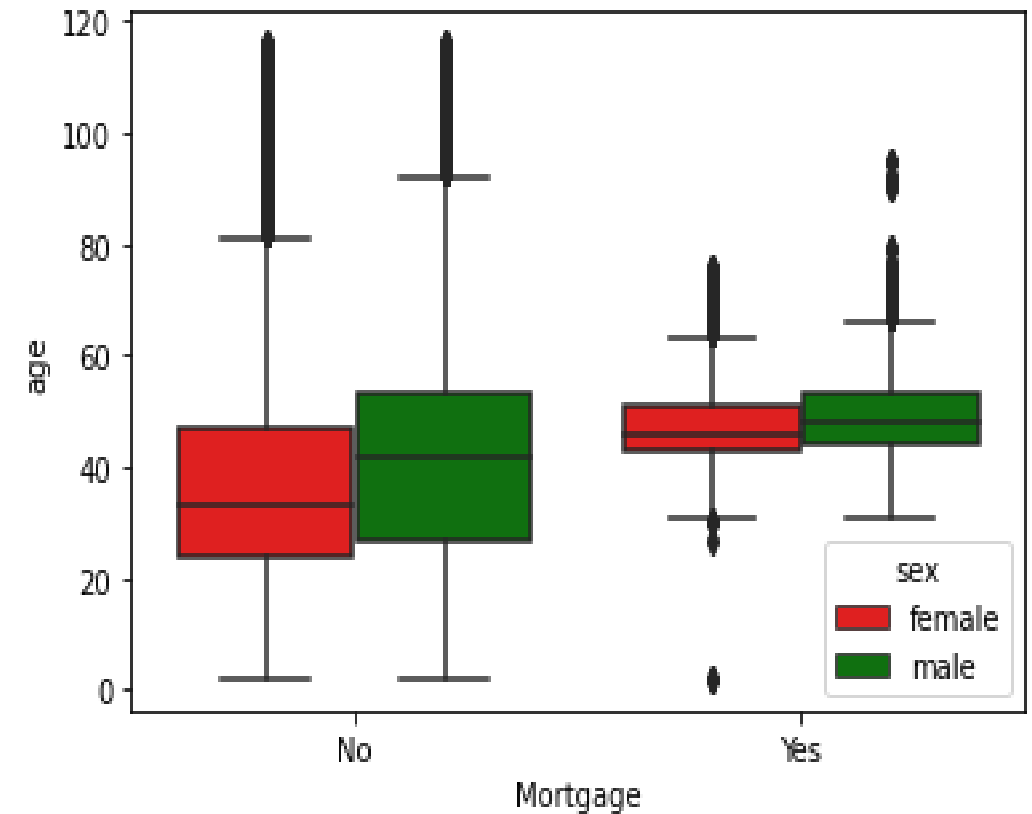
- Activity Index of Mortgage Users

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Mortgage



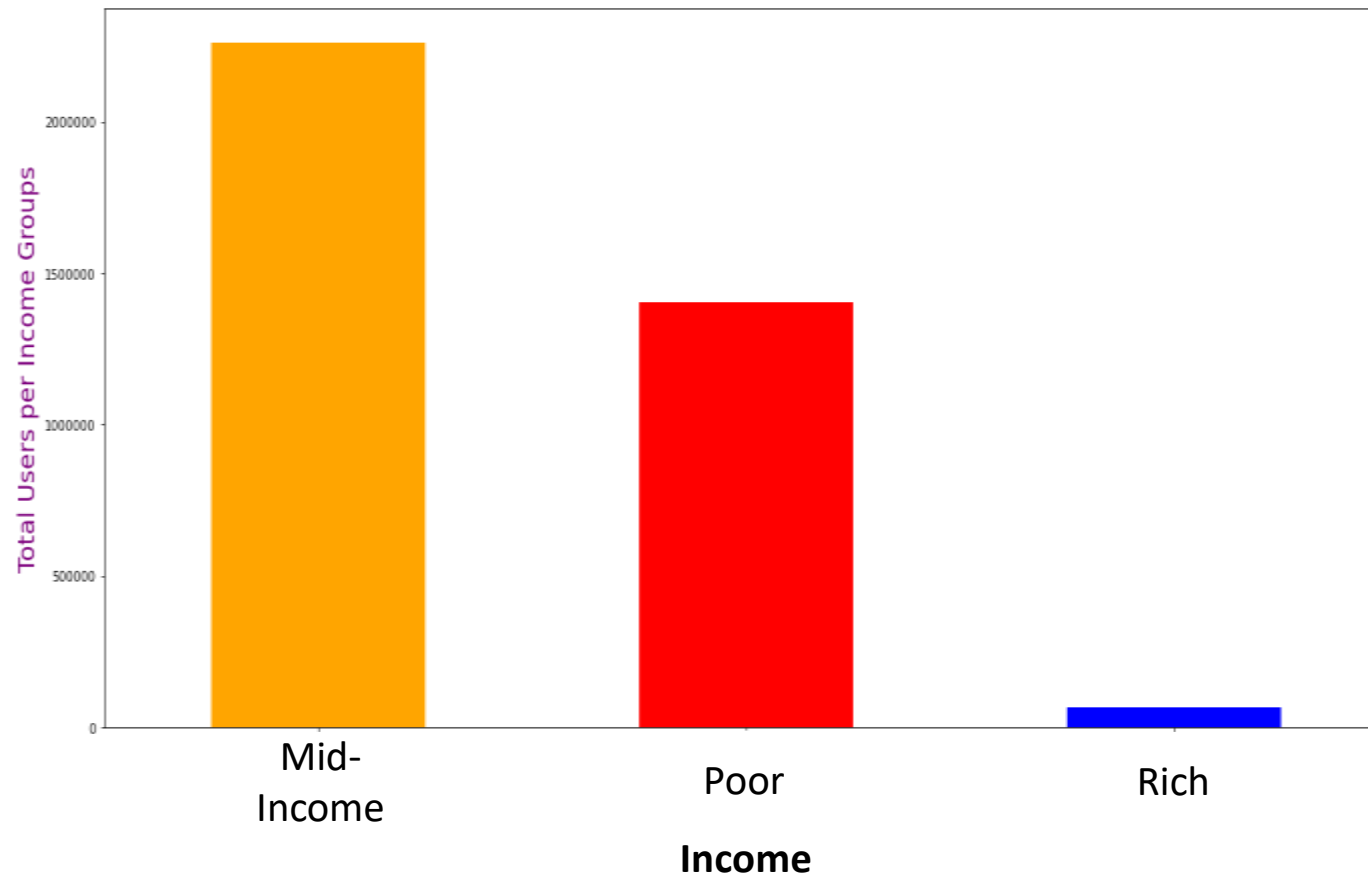
- Age Group Distribution of Mortgage users



- Gender and Age Distribution of Mortgage users

Exploratory Data Analysis-Cross Sales

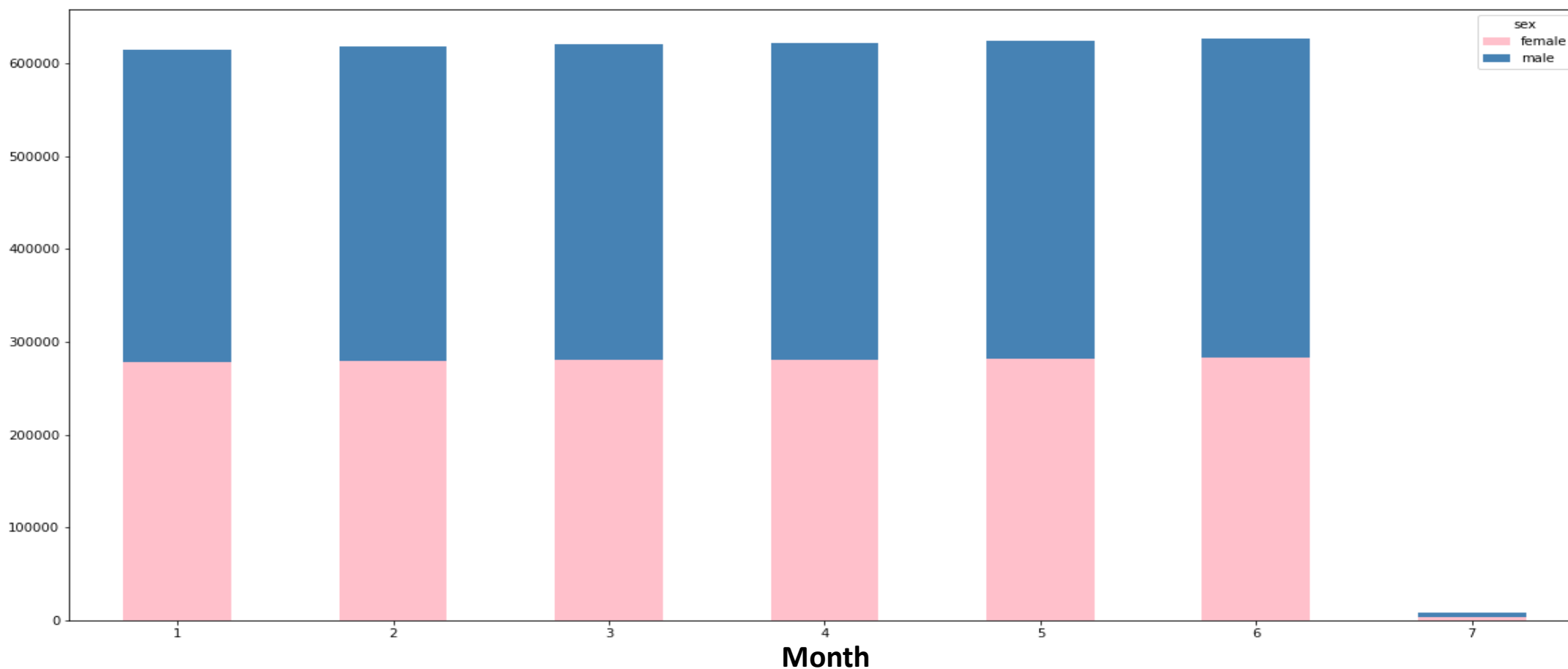
- Product Analysis in Detail: Mortgage



- Wealth Distribution Mortgage users

Exploratory Data Analysis-Cross Sales

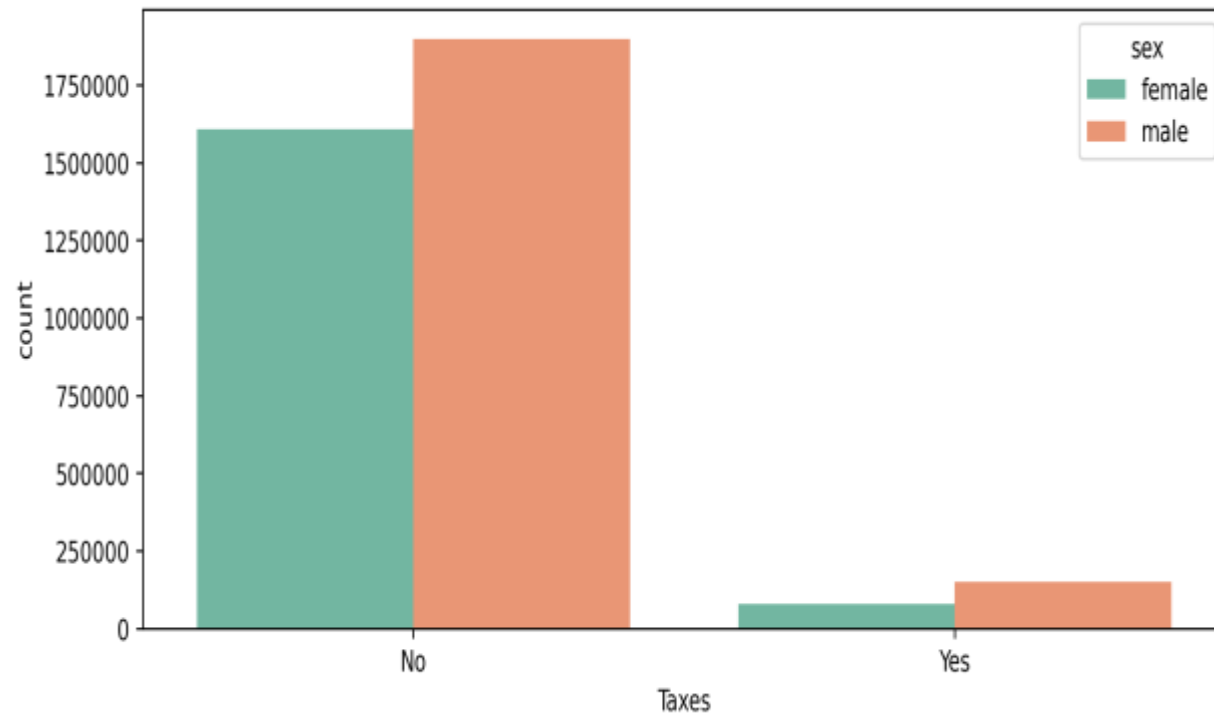
- Product Analysis in Detail: Taxes



- Monthly numbers of Tax Payment via XYZ Bank per gender

Exploratory Data Analysis-Cross Sales

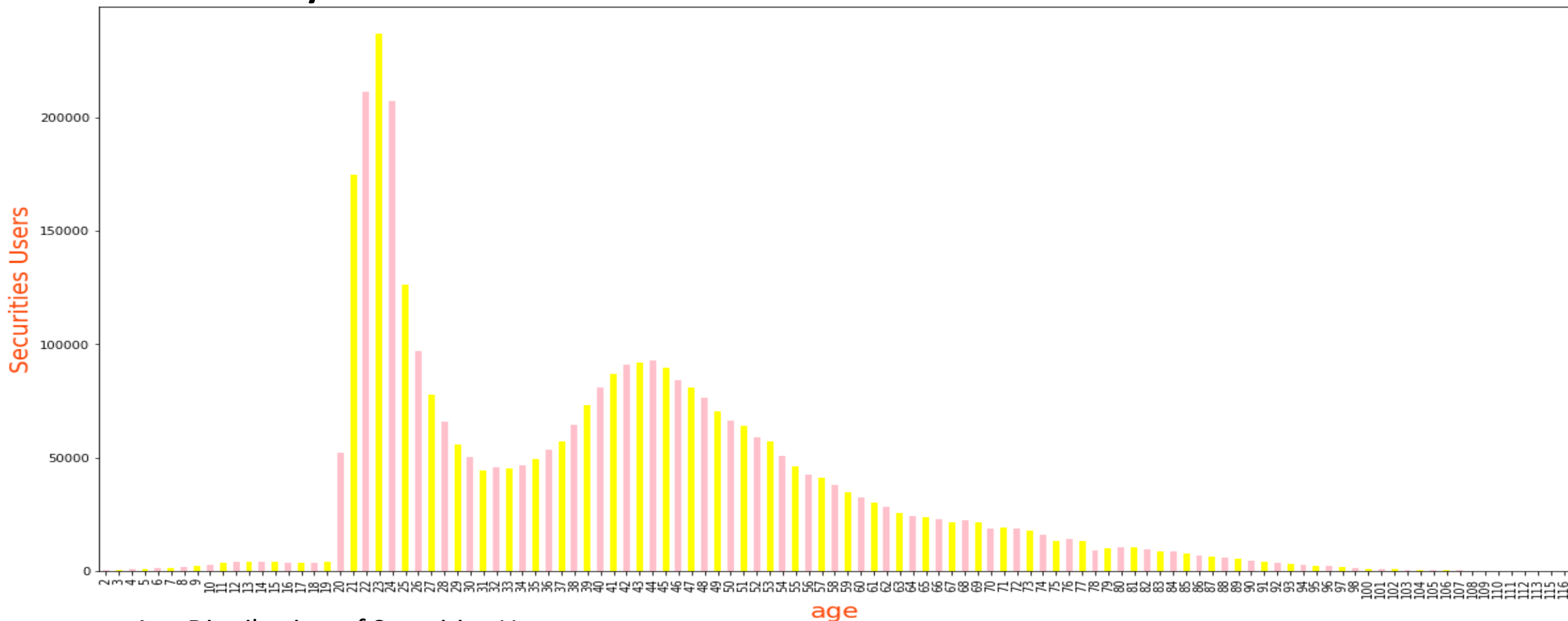
- Product Analysis in Detail: Taxes



- Tax Distribution by Gender

Exploratory Data Analysis-Cross Sales

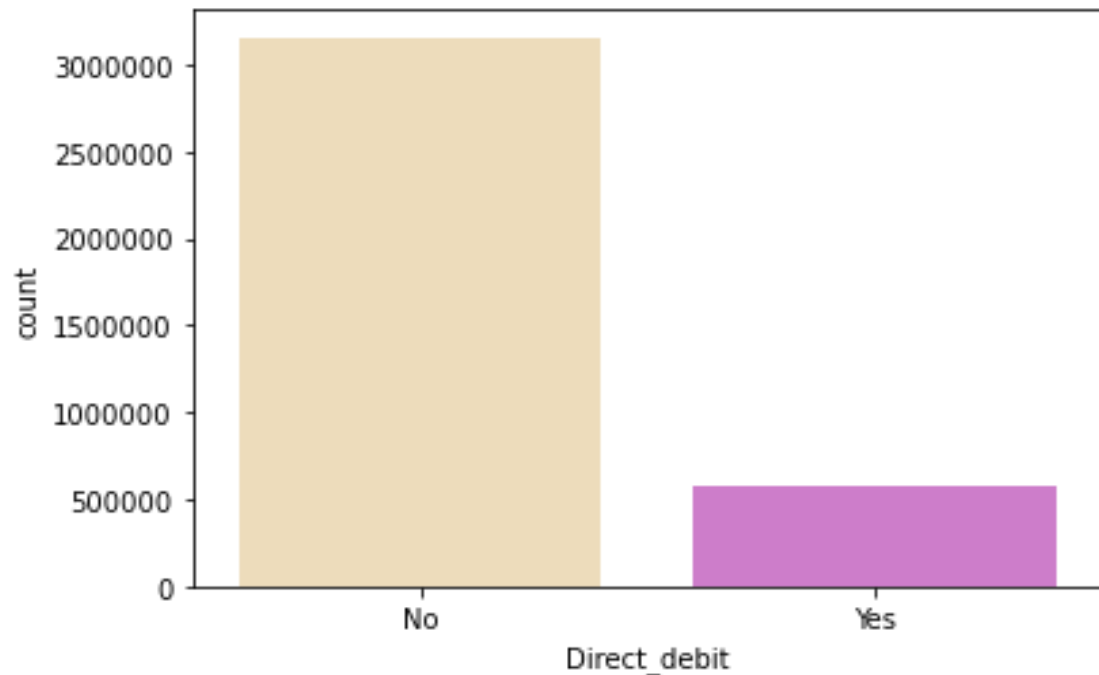
- Product Analysis in Detail: Securities



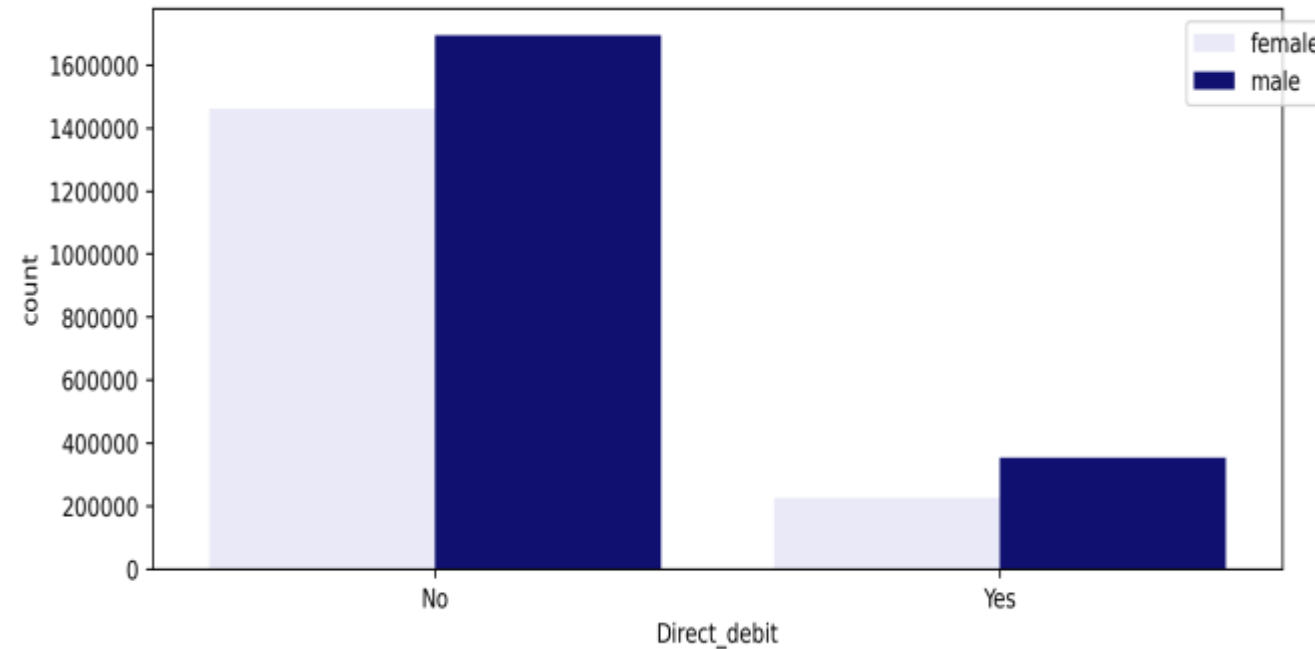
- Age Distribution of Securities Users

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Direct Debit



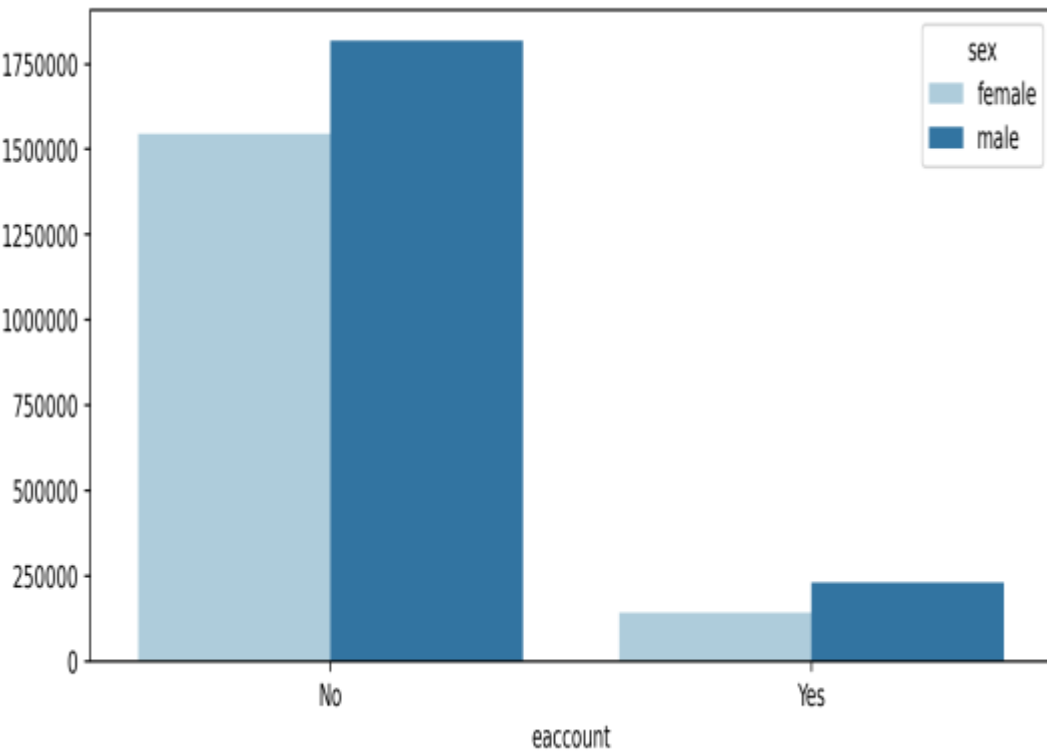
- Direct Debit Distribution



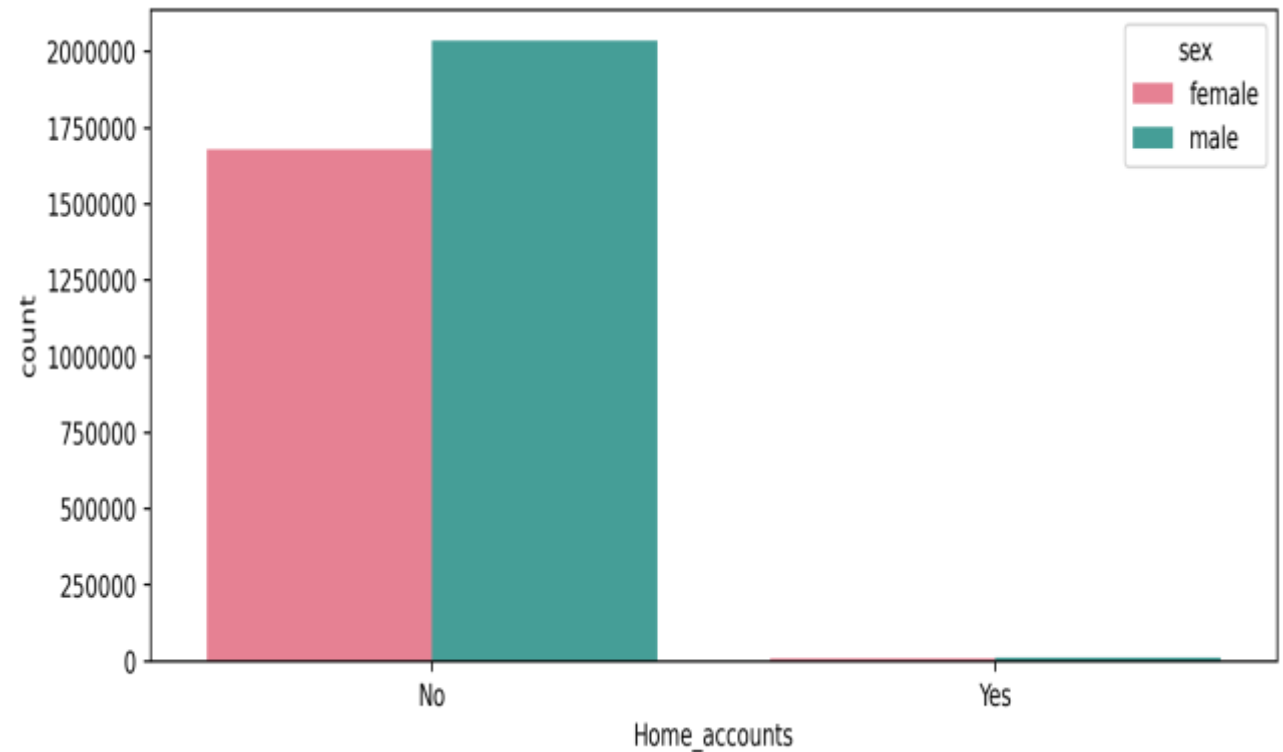
- Direct Debit Distribution by Gender

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: eaccount & Home Account



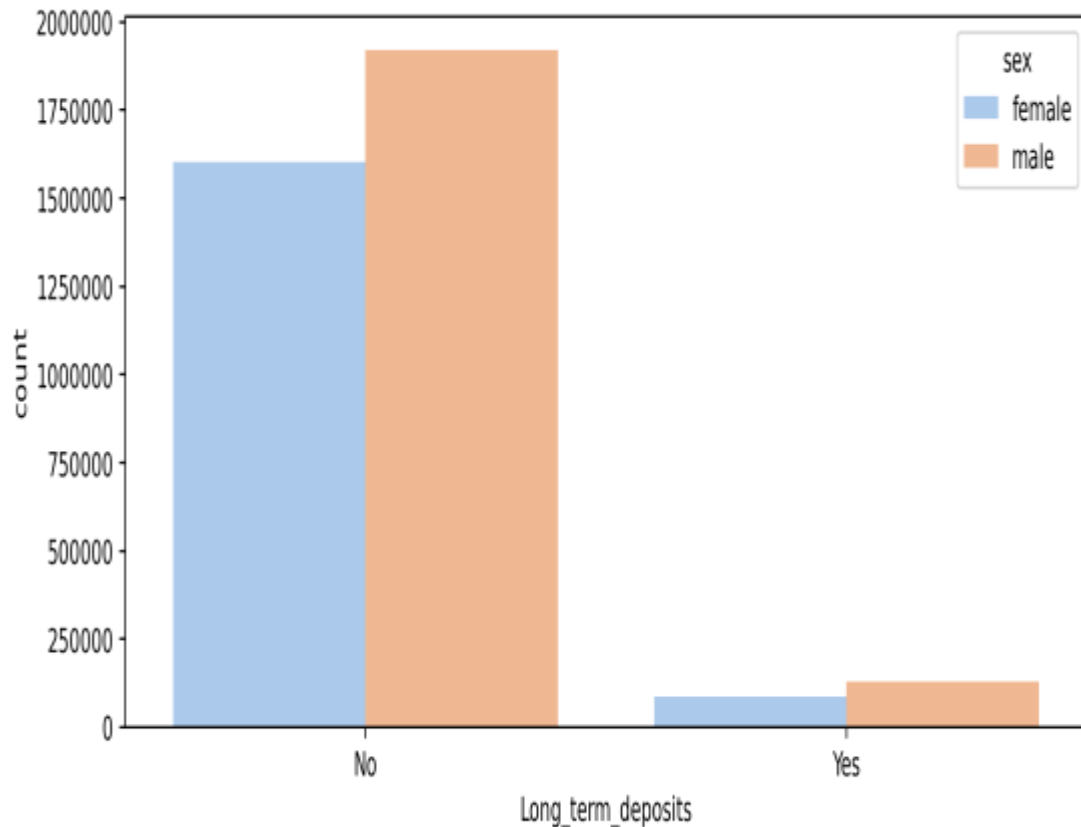
- eaccount Distribution by Gender



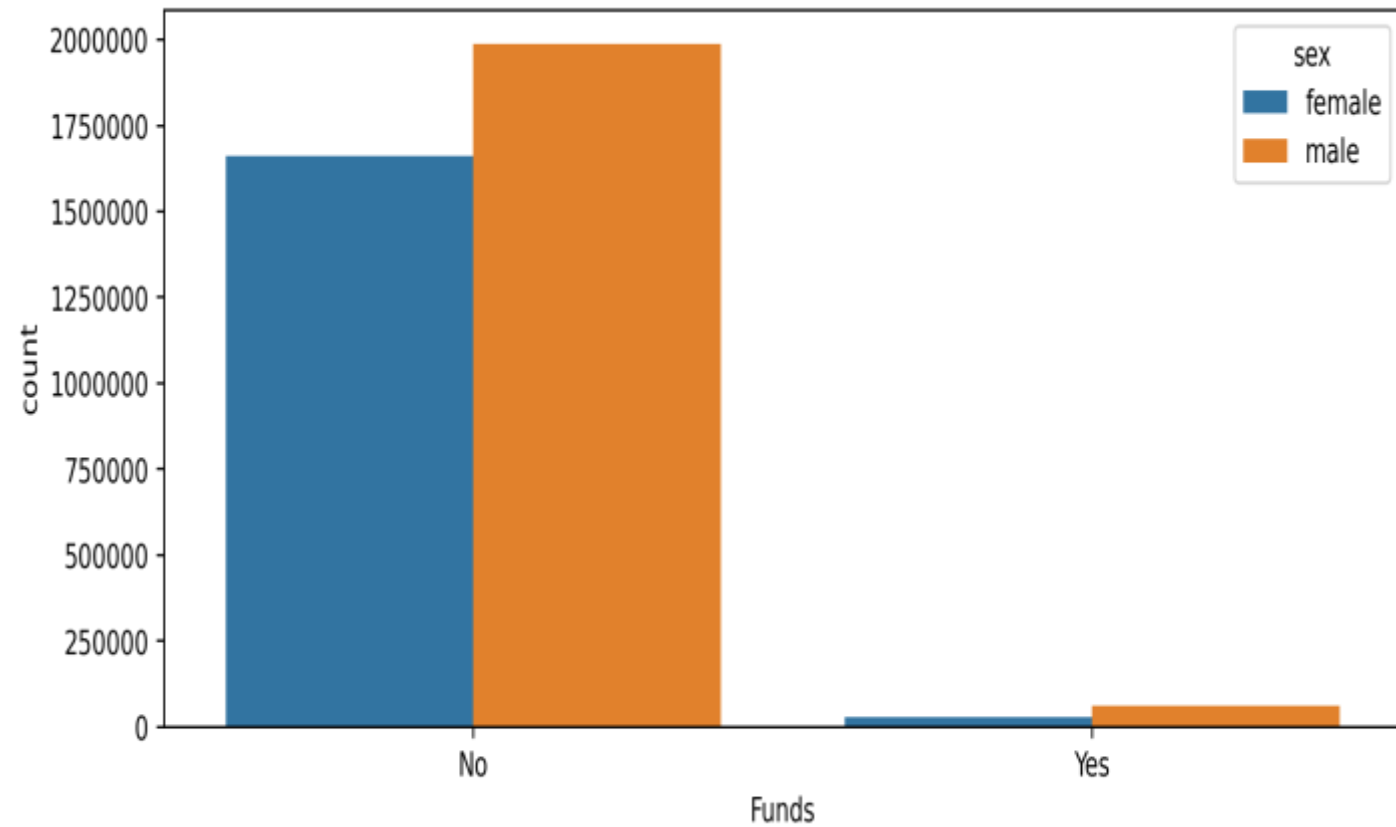
- Home Account by Gender

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Long Term Deposits & Funds



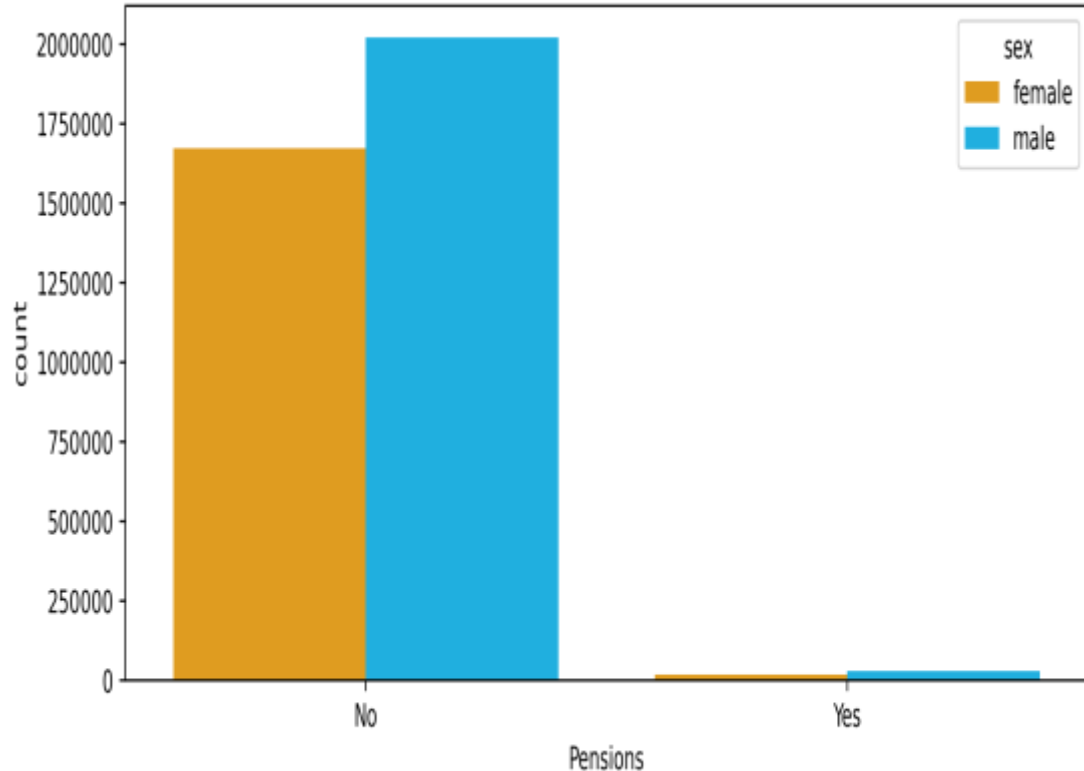
- Long Term Deposits Distribution by Gender



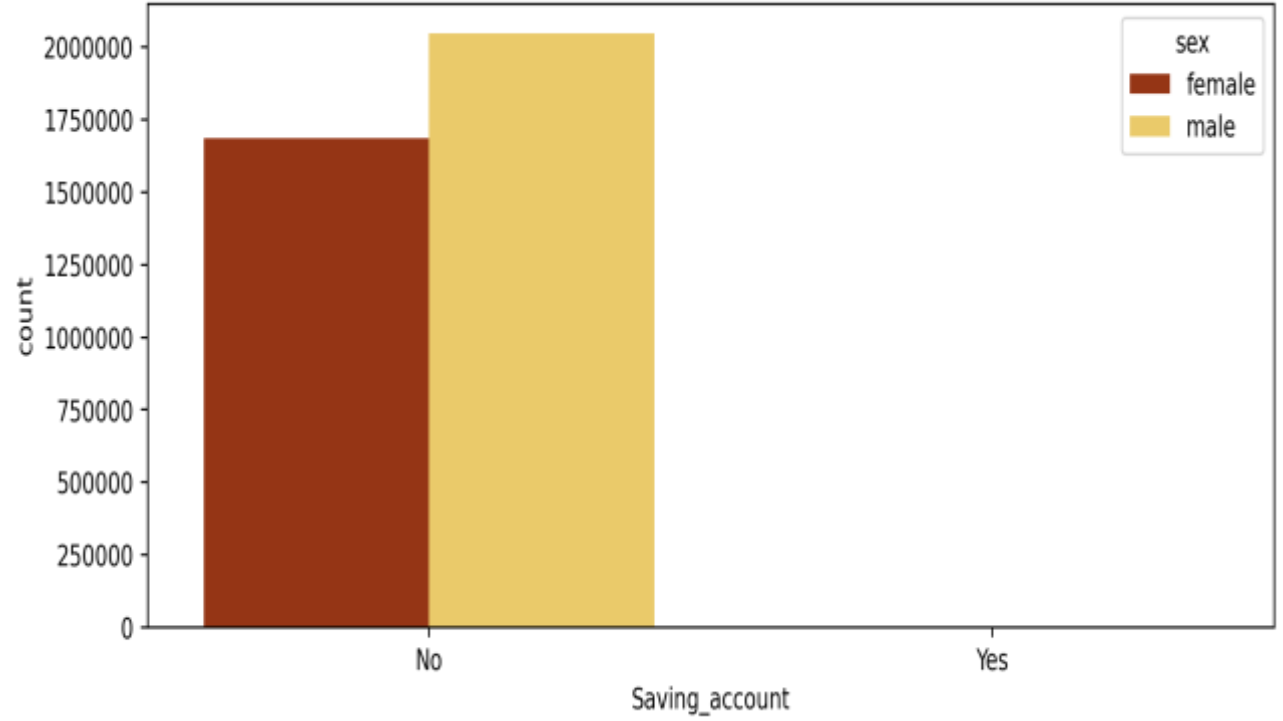
- Funds Distribution by Gender

Exploratory Data Analysis-Cross Sales

- Product Analysis in Detail: Pensions & Saving Accounts



- Pensions Distribution by Gender



- Saving Accounts Distribution by Gender

EDA Recommendations-1



FINDINGS,SUMMARY AND SOLUTION OFFERS:

As we all plotted cross product sellings and related parameters of XYZ Bank we can offer them to take into consideration these above to increase cross sellings:

- 1) Bank has dominantly young and mid aged customers who should be aimed to make buying cross products in advertisements or campaigns
- 2)Mid Income and Poor Income customers are more than rich customers which is a remarkable note to mention
- 3)Male and Female users has likely similar total Gross Incomes
- 4)Bank has a vast majority of "Local Customers" comparing to foreign customers

EDA Recommendations-2



FINDINGS,SUMMARY AND SOLUTION OFFERS:

- 5) Male customers has slightly more interested in cross products than females
- 6) 3 most popular cross sold products are direct debit, eaccount and mortgage which leads us to think perhaps Bank should invest more in digital banking to increase those sales.
- 7) Credit Card users have high amount of Inactive account index which makes us to think that many customers are choosing the bank only for credit card maybe combo campaigns of cross products with credit card may increase those sales.
- 8) Similar to Credit Card users , Mortgage users has high percentage of Inactive accounts and like in credit card topic combo campaigns including Mortgage may be beneficial.

