**Insight into the customer data**

Introduction:

This report analyses the dataset for customer details. The provided CSV/dataset includes the Customer details like Name, TotalPurchaseYTD, Yearly Income, Gender, education, Occupation, etc... This dataset has been sourced from the “Python Challenge”

The report is measured by the factors given in the “FinalData\_customers.csv”.

Analysis:

For doing the report analysis we have used Pandas for reading and analysing data from the CSV file. While we have used matplotlib.pyplot and seaborn for creating a graphical representation of the data which is a very good tool to visualise the data. Also, a calculated column called “Age” has been added to the report dataset for the CSV. This column has been added to do analysis based on Age across the company sales.

According to the report for customers, we can conclude that number of male and female customers is almost the same with male customers slightly higher. Also, we can see that the highest number of customers falls in the age group of “50-60” with the lowest age group being “Above 90”. Furthermore, we see that all the customers were above the age of 40 with the average age being 60. In terms of income group, we see that the highest number of customers were in the yearly income group of “25001-50,000” and the lowest were in the yearly income group of “greater than 100,000”. We also see that the company’s main customers are homeowners with more than 12,000 customers who own homes.

Total sales are highest for customers with a “bachelor’s degree” and occupation of “professional” while the lowest sales were for customers with a “Management” occupation with “Partial high school” education and “skilled manual” occupation with a “high school” education.

Also, by looking at the scatterplot we can see that there were few outliers with the highest female purchases.

We see that total purchases YTD was $5,600,400 and also that total purchases (YTD) made by customers were highest for the income bracket “Greater than 100,000” and lowest in the income bracket of “0-25000”. Also, negative purchases were recorded for customers with “Partial high school” education in the “25001-50,000” income bracket and with “bachelor” education in the “0-25000” income bracket. Furthermore, clerical occupation only had negative purchases in YTD. Also, total purchases by customers who had been with the company for a long time were in negative Purchases YTD.