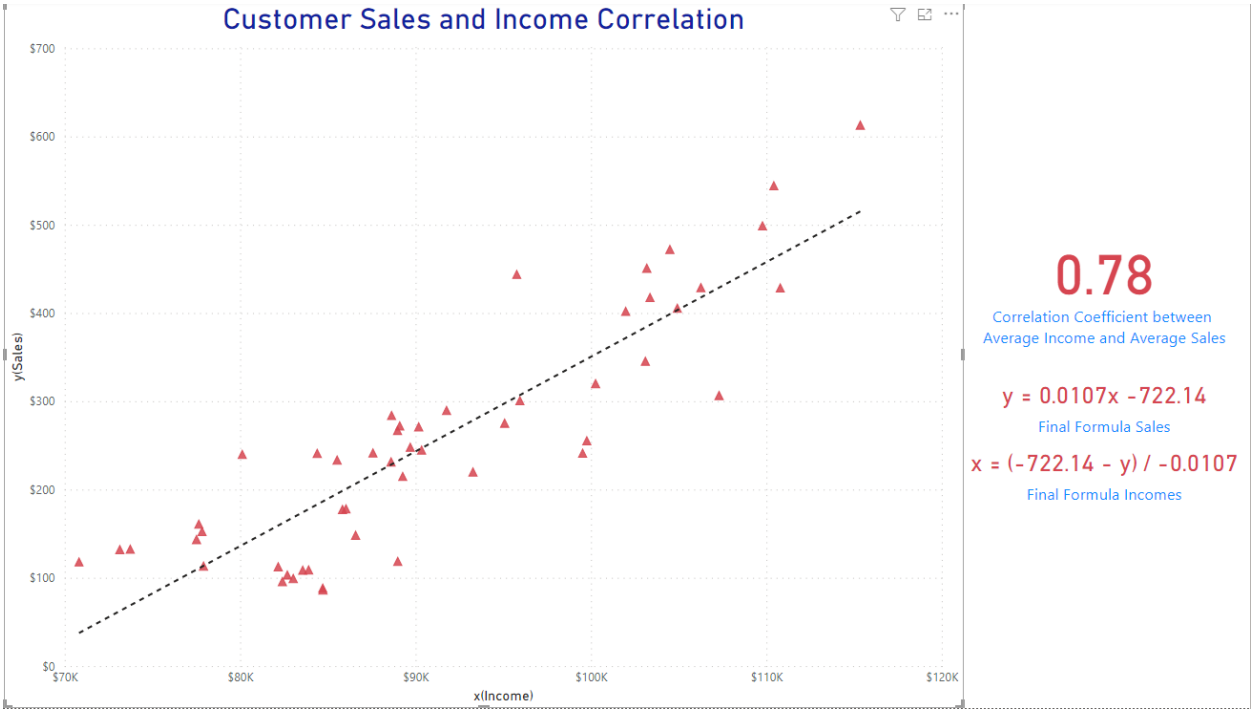
Market Analysis Report for National Clothing Chain
(Project and Results Summary)

Analytics Questions:

1. What is the correlation (R2 value) between sales and income?

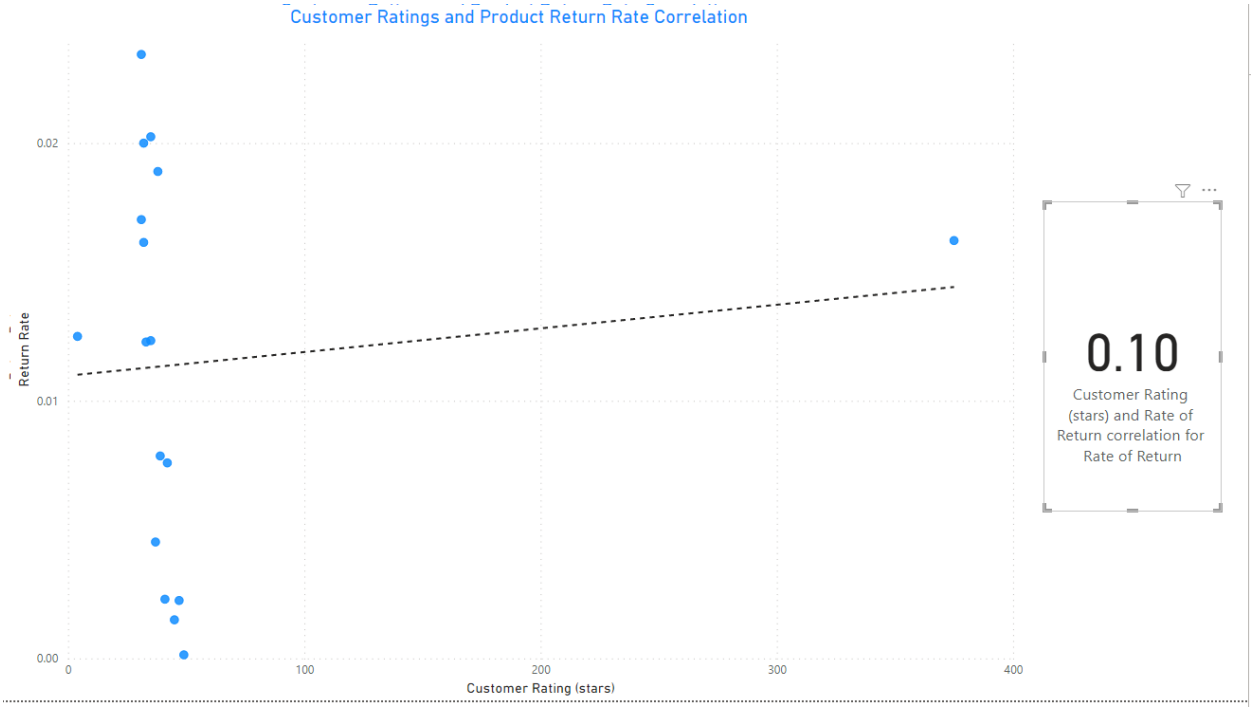
The sales-to-income correlation is 0.78 on the tab labeled "Sales and Income Correlation Formulas (Linear Regression)". The scatterplot for the linear regression between the variables and the matching card, together with the derived R2 value, is shown in the screen shot below.



2. What is the correlation (R2 value) between customer ratings and product return rate?

The correlation between Customer Ratings and Product Return Rate is 0.10, which indicates that the return rate is not being reduced with highest customer rating products and that product returns are occurring regardless of the customer ratings, on the tab "Sales and Income Correlation Formulas (Linear Regression)". The scatterplot for the linear regression between the variables and the matching card, together with the derived R2 value, is shown in the screen

shot below.



3. What are the linear regression formulas to predict customer sales and customer incomes?

The linear regression formulas are the following:
For predict customer sales y =

$$y = 0.0107x - 722.14$$

Final Formula Sales

For predict customer incomes x =

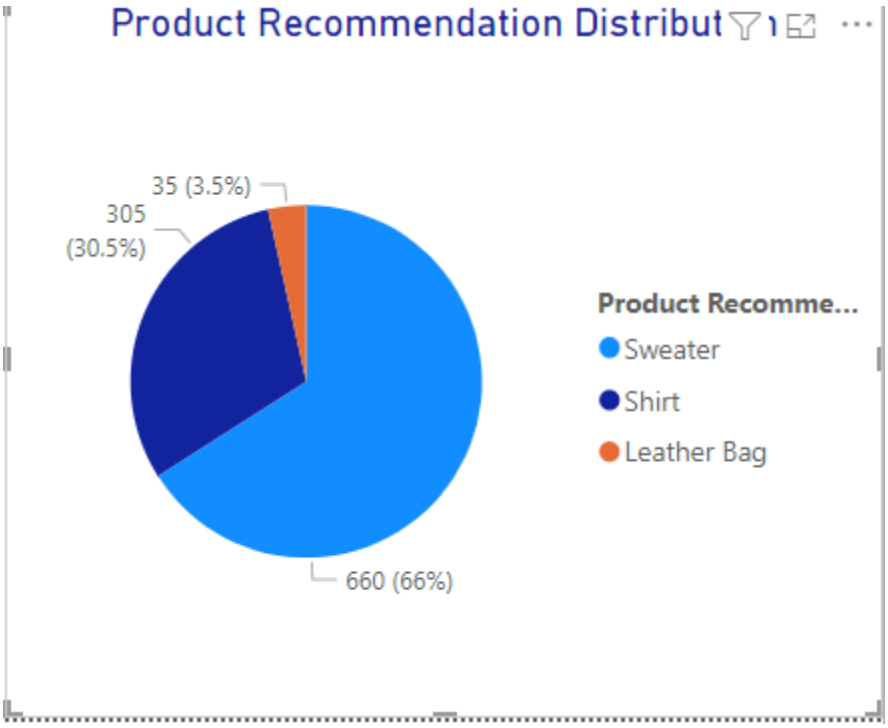
$$x = (-722.14 - y) / -0.0107$$

Final Formula Incomes

4. Which customer do you predict has the highest income?

The Illinois resident Jon Little has the highest estimated income in the "Income Distribution Prediction (Decomp. Tree)" tab, at $558143,93. We suggested giving him the leather bag.

5. Which product will be advertised the most?
   "Prod Insights" Tab
   The sweater will receive the most advertising.
   660 customers, or 66% of all customers, will receive the recommendation.


Product Recommendation Distribut
35 (3.5%)
305
(30.5%)
660 (66%)
Product Recomme...
Sweater
Shirt
Leather Bag