**Market Analysis Report for National Clothing Chain**

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This report is a summary of statistical analysis performed by PowerBI based on the following business requirements.

**Business Requirement**

An online national clothing chain needs your help creating a targeted marketing campaign. Sales have been flat and they want to lure lost customers back. They want to advertise specific products to specific customers in specific locations, but they don’t know who to target. They have three products in mind:

Shirt: $25, Sweater: $100, Leather Bag: $1,000. They need you to conduct an analysis to determine the best product to advertise to each customer.

1. **Regression Analysis**

If there is a linear relationship between how much average income per state in the US can explain the amount of goods purchased ($), then we can classify our customers based on average income.

**グラフ, 散布図

自動的に生成された説明**

**Fomula:** Predicted Income = 72.433 Average Sales in 6 month + 72,638

Correlation(R2) = 0.78

The coefficient of determination indicates a strong correlation between average income and the amount of product purchased by customers.

The highest income Customer from linear regression model is below.

|  |  |  |  |
| --- | --- | --- | --- |
| Customer ID | First Name | Last Name | Predicted Income($) |
| JLit30836 | Jon | Little | 452911.46 |

1. **Proposal of Recommended Item**

Using this linear regression model, we calculated the average income for each client. The results show that all but one of our customers belong to the top 22% (>$75,000) of average income per U.S. state. I used the table below to determine the items to suggest for each customer. Since the leather bag price is $1000, I based my decision on the customer's projected income from purchases in excess of $1000 per customer per day.

**Table for determining which items to recommend**

|  |  |  |  |
| --- | --- | --- | --- |
|  | X:Predicted Income($) | | |
| X<60,000 | 60000≦X<140,000 | 140,000≧X |
| **Recommeded Item** | Shirt | Sweater | Leather Bag |

グラフ, ウォーターフォール図

自動的に生成された説明

Most advertised product will be Sweater.

1. **Customer Satisfaction and Return Rates**

The results of the analysis of customer product ratings and return rates for further profit are shown below.

**グラフ, 散布図

自動的に生成された説明**

**Fomula:** Predicted Return Rate = -0.011 Customer Ratings + 0.054

Correlation(R2) = 0.69

It was found that the higher the customer's evaluation of the product, the higher the return rate.