

Customer Personality Analysis Report

Introduction

Customer Personality Analysis is a detailed examination of a company's ideal customers. This analysis helps businesses understand their customers better, allowing them to modify products and marketing strategies according to the specific needs, behaviors, and concerns of different customer segments. Understanding customer behavior is crucial for any business looking to improve its products and marketing efforts. By analyzing customer segments, response rates, product preferences, and acquisition trends, businesses can tailor their strategies to better meet customer needs and drive growth.

Dataset

The dataset used for this analysis includes the following attributes:

People:

- **ID:** Customer's unique identifier
- **Year_Birth:** Customer's birth year
- **Education:** Customer's education level
- **Marital_Status:** Customer's marital status
- **Income:** Customer's yearly household income
- **Kidhome:** Number of children in customer's household
- **Teenhome:** Number of teenagers in customer's household
- **Dt_Customer:** Date of customer's enrollment with the company
- **Recency:** Number of days since customer's last purchase
- **Complain:** 1 if the customer complained in the last 2 years, 0 otherwise

Products:

- **MntWines:** Amount spent on wine in the last 2 years
- **MntFruits:** Amount spent on fruits in the last 2 years
- **MntMeatProducts:** Amount spent on meat in the last 2 years
- **MntFishProducts:** Amount spent on fish in the last 2 years
- **MntSweetProducts:** Amount spent on sweets in the last 2 years
- **MntGoldProds:** Amount spent on gold in the last 2 years

Promotion:

- **NumDealsPurchases:** Number of purchases made with a discount
- **AcceptedCmp1:** 1 if customer accepted the offer in the 1st campaign, 0 otherwise
- **AcceptedCmp2:** 1 if customer accepted the offer in the 2nd campaign, 0 otherwise
- **AcceptedCmp3:** 1 if customer accepted the offer in the 3rd campaign, 0 otherwise
- **AcceptedCmp4:** 1 if customer accepted the offer in the 4th campaign, 0 otherwise
- **AcceptedCmp5:** 1 if customer accepted the offer in the 5th campaign, 0 otherwise
- **Response:** 1 if customer accepted the offer in the last campaign, 0 otherwise

Place:

- **NumWebPurchases:** Number of purchases made through the company's website
- **NumCatalogPurchases:** Number of purchases made using a catalog
- **NumStorePurchases:** Number of purchases made directly in stores
- **NumWebVisitsMonth:** Number of visits to the company's website in the last month

Data Preparation

Data preparation steps include:

1. **Data Cleaning:** Handle missing values, correct data types, and address any inconsistencies.
2. **Feature Engineering:** Create new features such as Total Amount Spent by summing amounts spent on different product categories.

Big Action Numbers (BANs)

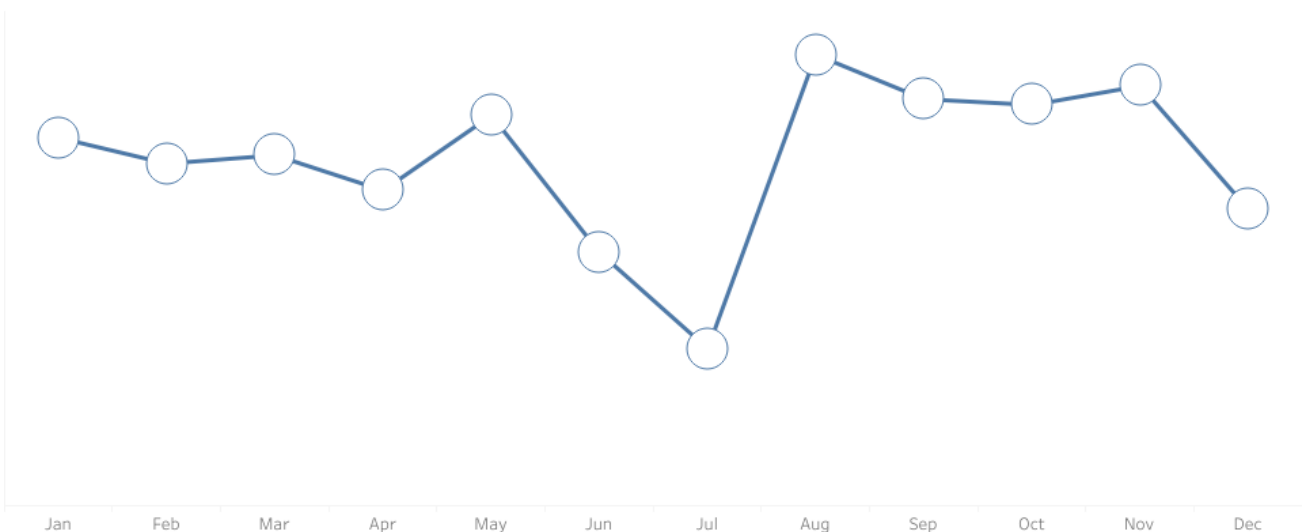
1. **Total Number of Customers:** 2240
2. **Average Income:** \$52,247
3. **Total Revenue:** \$1,356,988
4. **Average Recency:** 49 days
5. **Average Customer Lifetime Value (CLV):** \$605.8

Key Insights

1. **Total Amount Spent Over Time:**

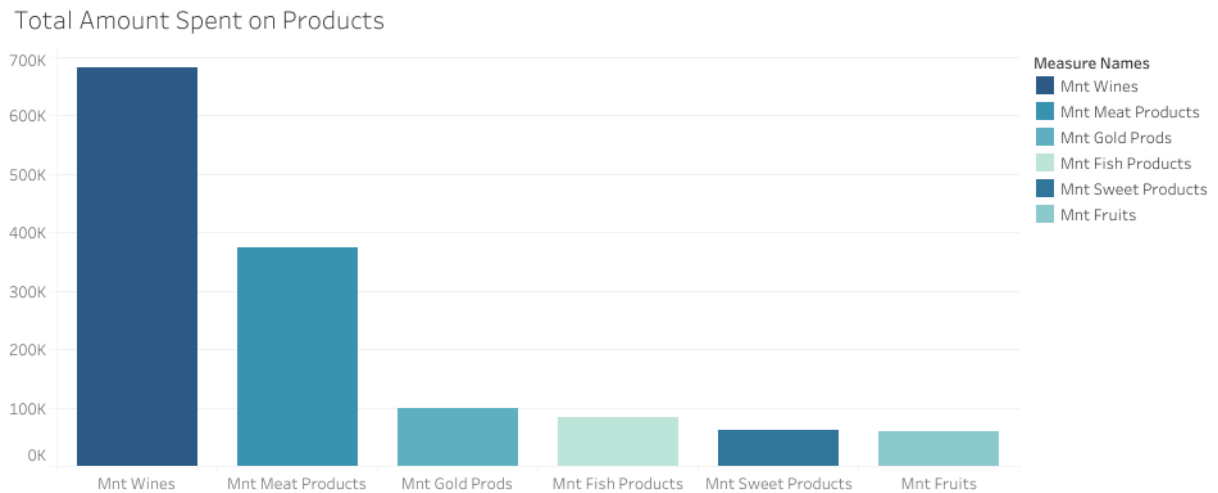
Visualize trends in customer spending over time to identify peak purchasing periods.

Total Amount Spent over Time



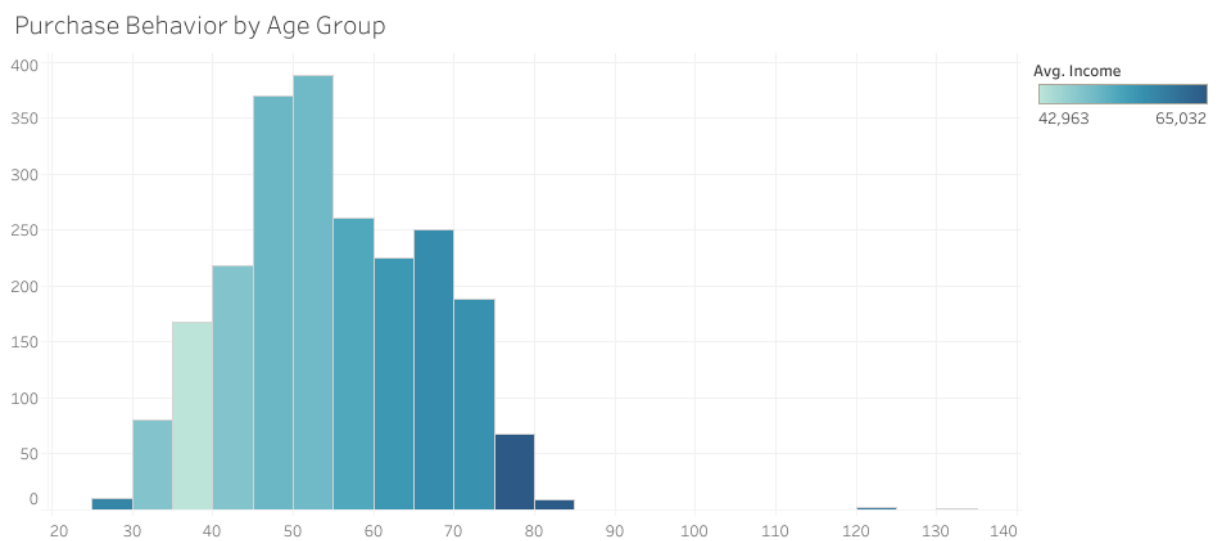
2. Total Amount Spent on Products:

Analyze spending on different product categories to determine product preferences and high-value products.



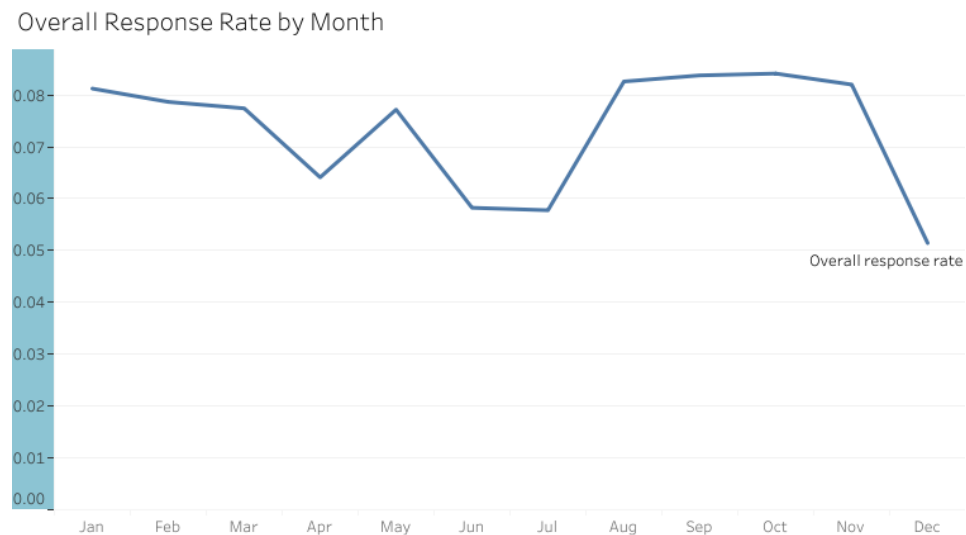
3. Purchase Behavior by Age Group:

Segment customers by age to understand how purchasing behavior varies across different age groups.



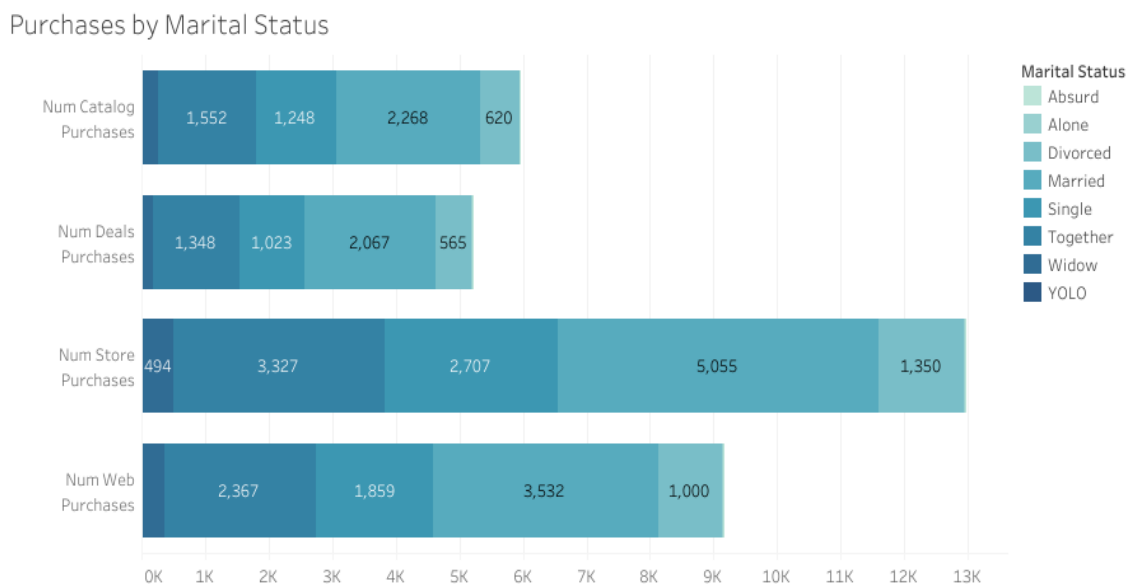
4. Overall Response Rate by Month:

Track the monthly response rate to marketing campaigns to identify the most and least effective months for campaigns.



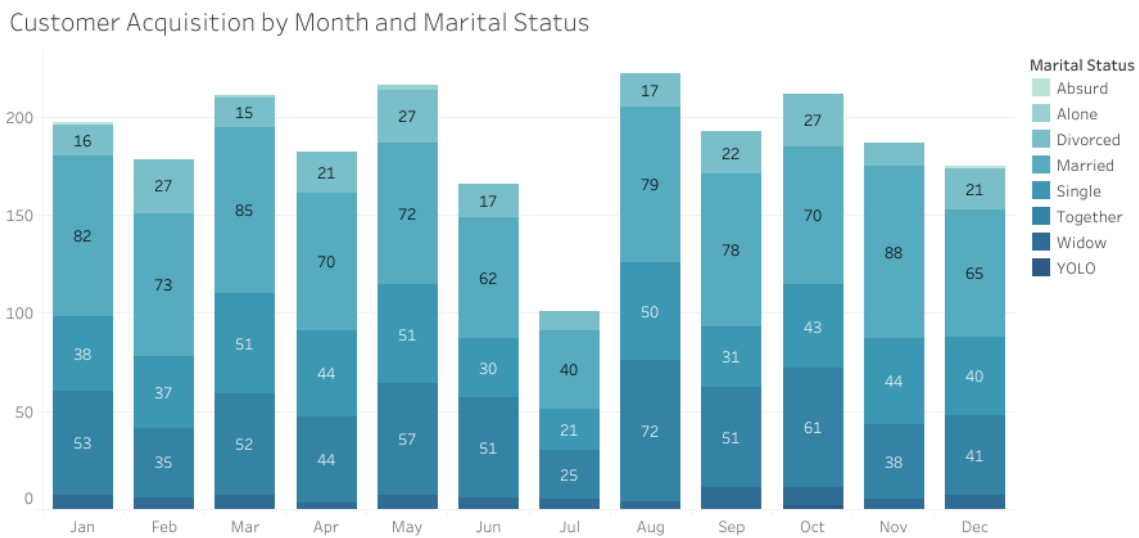
5. Purchases by Marital Status:

Examine how marital status influences purchasing behavior and product preferences.



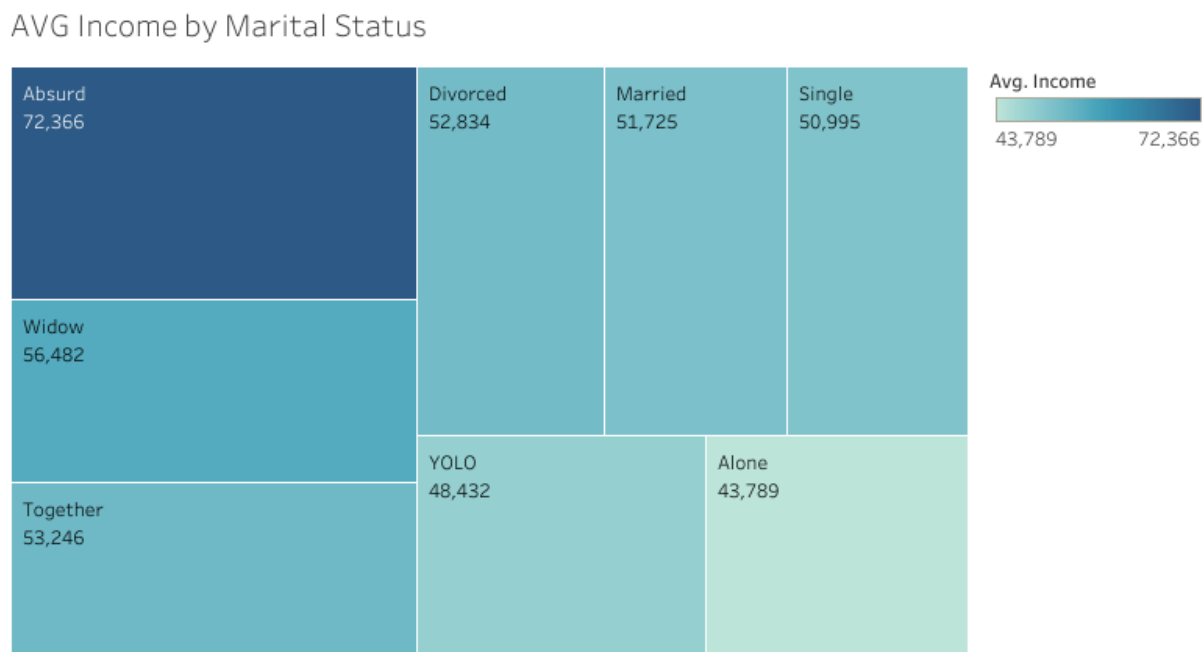
6. Customer Acquisition by Month and Marital Status:

Analyze the rate of new customer acquisitions by month and marital status to understand seasonal trends and the impact of marital status on acquisition.



7. Average Income by Marital Status:

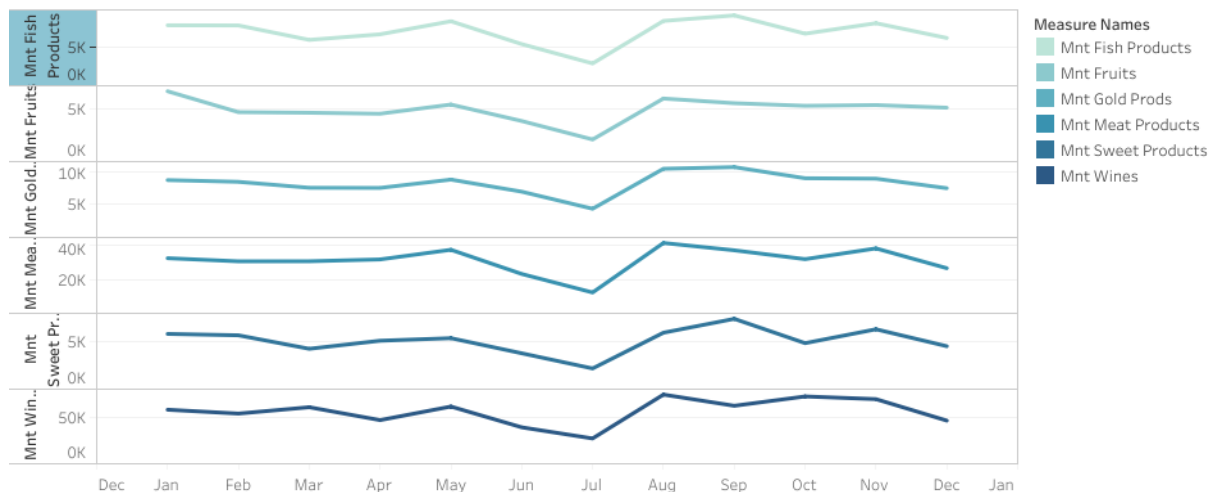
Compare average income across different marital statuses to identify potential correlations between income levels and purchasing behavior.



8. Amount Spent on Product Over Time:

Analyzing the total expenditure on various product categories over a specified period. This analysis helps businesses understand trends in customer spending, identify peak purchasing periods, and make informed decisions about inventory, marketing, and product development.

Amount Spent on Product Over Time



Conclusion

Customer Personality Analysis provides valuable insights into customer behavior, enabling businesses to tailor their strategies for different customer segments. This leads to more effective marketing and product development, ultimately improving customer satisfaction and driving business growth.

Recommendations

- 1. Targeted Marketing Campaigns:**
 - Use customer segmentation to create tailored marketing campaigns that address the specific needs and preferences of different customer groups.
- 2. Product Development:**
 - Develop new products or modify existing ones based on the preferences and spending patterns of high-value customer segments.
- 3. Improve Customer Retention:**
 - Identify factors contributing to customer churn and implement strategies to improve customer retention, such as personalized offers and loyalty programs.
- 4. Optimize Promotional Strategies:**
 - Analyze the effectiveness of different promotional campaigns and optimize future strategies based on the response rates and customer feedback.
- 5. Enhance Customer Experience:**
 - Use insights from customer complaints and feedback to enhance the overall customer experience, addressing common pain points and improving service quality.