

# Sales and Customer Analysis for Adventure Works

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## 1. Introduction

The purpose of this project is to analyze sales data and customer behaviour for the Adventure Works Company, a multinational retailer. Through this project, we aim to identify trends and insights that can inform business decisions and improve sales performance.

## 2. Data Collection

We collected our data from the supervisor, which includes data on sales transactions, customers, products, product Categories and subcategories. The data was cleaned and organized using Microsoft Power BI, and stored for later analysis.

### 3. Exploratory Data Analysis

During the EDA phase, we performed data cleaning and preprocessing to prepare the data for analysis. We then conducted univariate, bivariate, and multivariate analysis to identify trends and correlations within the data. The results of our analysis were visualized using a variety of charts and graphs.

### 4. Statistical Analysis

In addition to the exploratory analysis, we performed a statistical analysis to validate our findings and draw conclusions.

### 5. Results and Recommendations

Based on our analysis, we identified several trends and insights that can inform future decisions. These include lower increase in sales as time passe, the fact that best sales are in Q2 and Q4, the top-sales category and territory and finally customer behaviors due to orders and churn Our recommendations for improvement include increasing advertisement and promotions during Q2 and Q4, Expanding the Bikes category by introducing new products and increasing marketing efforts and finally Implementing a loyalty program to increase repeat purchases from customers.

### 6. Conclusion

Through our analysis, we have provided valuable insights and recommendations that can help inform business decisions for Adventure Works. We believe that the data we have analyzed and the recommendations we have made will assist in improving sales performance and customer satisfaction.

### 7. Appendices

We include data visualizations and statistical tables and formulas that support our analysis in the sales pdf and power bi file. These resources provide additional context and clarity to our findings.