

# Bike Sales Data Analysis

## Overview:

This project aims to analyze bike sales data to gain insights into customer demographics and purchasing patterns. The dataset was cleaned and visualized using Excel, focusing on customer age brackets, average income per purchase, and customer commute behaviors.

## Dataset:

- **Data Source:** The analysis is conducted on a dataset containing bike sales information, including customer demographics, purchase details, and commute patterns.
- **Data Cleaning:** Utilized Excel to clean and preprocess the dataset for consistency and accuracy in analysis.
- **Raw Dataset:** (*Attached*) Included with the analysis documentation is the original, unmodified dataset for reference and transparency.

## Use Case:

Understanding Bike Sales Trends

## Investigative Analysis:

### 1. Customer Age Brackets:

- **Visualization:** Utilized Excel's charting tools to create a histogram showcasing the distribution of customers across various age groups.
- **Insights:** Explored age demographics to understand the target customer age range and potential market segments.

### 2. Average Income per Purchase:

- **Calculation:** Utilized Excel functions to calculate the average income per purchase.
- **Visual Representation:** Created a bar chart to visualize the average income, aiding in understanding the purchasing power of customers.

### 3. Customer Commute Patterns:

- **Data Aggregation:** Analyzed commute data to identify common commuting patterns among customers.
- **Visualization:** Created a pie chart or bar chart illustrating the prevalent commute behaviors (e.g., cycling to work, leisure rides).

## Insights & Applications:

- **Target Audience Identification:** Identification of key customer age groups helps in targeted marketing strategies.
- **Purchasing Power Assessment:** Understanding the average income per purchase assists in pricing strategies and product offerings.
- **Market Segmentation:** Analysis of customer commute behaviors aids in tailoring marketing campaigns and product features.

## Conclusion:

- The analysis of bike sales data provides valuable insights into customer demographics, purchasing behaviors, and commute patterns. This information can be leveraged to drive informed business decisions and marketing strategies.

## Significance:

- Demonstrates proficiency in data analysis, visualization, and actionable insights derived from Excel-based analysis of bike sales data.
- **Dataset Inclusion:** (*Attached*) The original, unmodified dataset is included for reference, ensuring transparency in the analysis process.

### Additional Details:

- **Visualization Preview:** A screenshot of the final visualization is included for a preliminary understanding of the insights derived.

