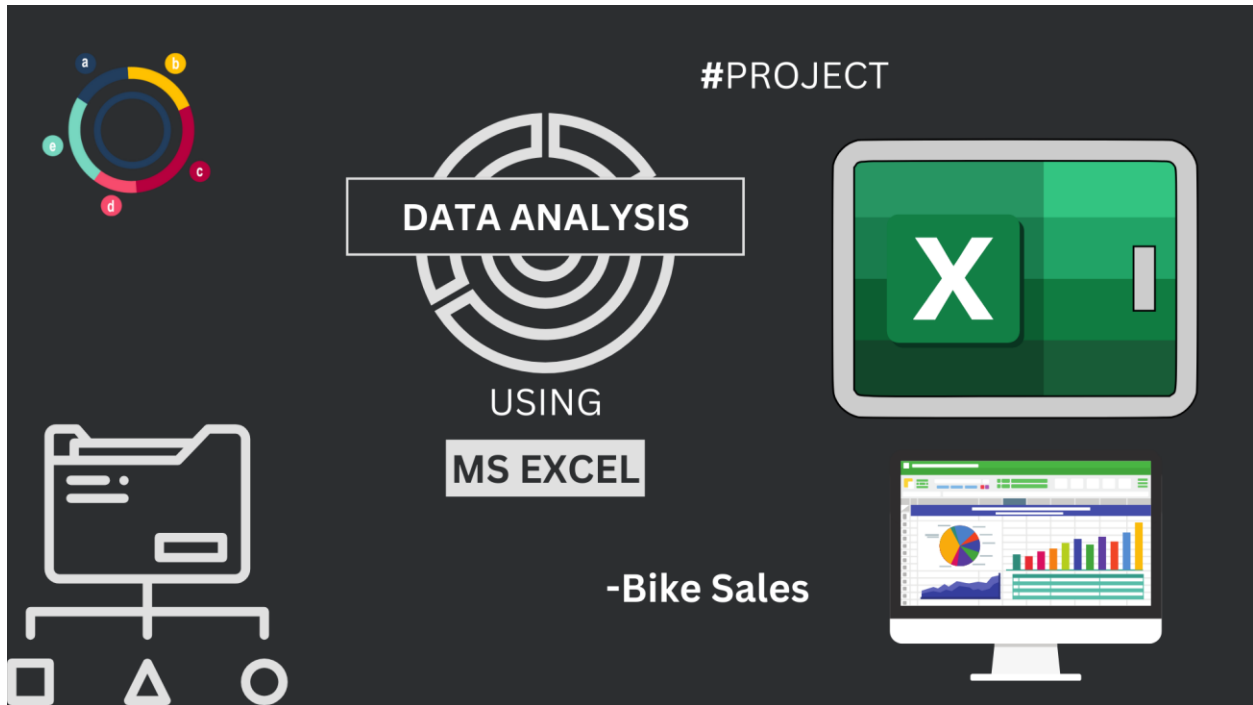# Bike Sales Dashboard in Excel: Data Visualization and Insights

Description:

For this Excel project, I worked with a bike sales dataset to gain hands-on experience in spreadsheet data analysis. After cleaning the data and removing duplicates, I transformed abbreviations into full forms for improved readability. I also categorized ages into groups for easier visualization. Utilizing pivot tables and charts, I analyzed the data and created a bike sales dashboard. Visualizing the results allowed stakeholders to easily understand trends and patterns in the data. This project provided valuable knowledge in using formulas, functions, pivot tables, and charts in Excel. For this Excel project, I worked with a bike sales dataset to gain hands-on experience in spreadsheet data analysis. After cleaning the data and removing duplicates, I transformed abbreviations into full forms for improved readability. I also categorized ages into groups for easier visualization. Utilizing pivot tables and charts, I analyzed the data and created a bike sales dashboard. Visualizing the results allowed stakeholders to easily understand trends and patterns in the data. This project provided valuable knowledge in using formulas, functions, pivot tables, and charts in Excel.

Skills: Data Collection, Critical Thinking, Data Visualization, Advance Excel.

🎯**Objective:**

💥The objective of my Excel project was to improve my proficiency in using spreadsheets and Excel's features for data cleaning, analysis, and visualization. Through this project, I aimed to enhance my ability to organize and manipulate data, perform calculations and analysis, and create visual representations of data using charts and graphs.

🎯**Data gathering & cleaning:**

💥For my Excel project, I started by gathering a dataset related to bike sales from GitHub. I downloaded the dataset in its raw format, which was provided in a CSV file.

💥To begin the data cleaning process, I imported the CSV file into Excel and created a working sheet to work with a copy of the raw data.

💥I focused on cleaning the data by identifying and removing any duplicate entries. By removing duplicates, I ensured that each bike sale record was unique and accurate.

💥Additionally, I noticed that certain columns in the dataset contained abbreviations for variables such as marital status and gender. To make the data more understandable and consistent, I replaced these abbreviations with their corresponding full forms.

💥Furthermore, I organized the age data into meaningful groups to facilitate visualization. I created a new column using Excel's IF function to categorize individuals into age groups such as "Adolescent," "Middle Age," and "Old" based on their age values.

💥Throughout the data cleaning process, my focus was on ensuring data accuracy, consistency, and usability for further analysis and visualization tasks.

🎯**Data Processing:**

💥 Once the data gathering and cleaning phase was completed, I proceeded with data processing in Excel for my project.

💥To begin, I created a separate worksheet dedicated to the analysis and visualization of the bike sales data. This worksheet served as the foundation for data processing tasks.

💥One of the key data processing steps I took was the creation of a pivot table. By utilizing Excel's pivot table feature, I was able to summarize and aggregate the bike

sales data based on different variables such as sales data, customer demographics, and product details. This allowed for easier analysis and visualization of the data.

💥Additionally, I leveraged Excel's charting capabilities to create visual representations of the bike sales data. By selecting the appropriate chart types and configuring the data series, I was able to present the insights and trends in a visually appealing manner.

💥Throughout the data processing phase, I focused on generating meaningful insights and presenting them in a clear and understandable manner. Excel's functions, formulas, and features were utilized to manipulate and analyze the data effectively, enabling me to gain valuable insights from the bike sales dataset.

🎯**Questions asked:**

1. What is the total number of bike sales recorded in the dataset?
2. What is the distribution of bike sales by product category?
3. What is the average sales price for each product category?
4. Which month or time period had the highest number of bike sales?
5. How does the sales performance vary across different regions or locations?
6. What is the average age of customers who purchased bikes?
7. Are there any correlations between customer demographics (such as age or gender) and the type of bike purchased?
8. How does the sales performance vary between different sales representatives or employees?
9. Are there any seasonal trends or patterns in bike sales?
10. What is the overall revenue generated from bike sales during the analyzed period?
11. Are there any outliers or anomalies in the dataset that need further investigation?
12. What is the customer satisfaction level based on feedback or ratings provided?

👉These questions aimed to explore various aspects of the bike sales dataset and gain insights into sales performance, customer behavior, and overall business performance.

🎯**Key insights:**

- Popular bike categories: Mountain bikes were found to be the most popular among customers.
- Price variations: Average sales prices varied across different bike categories, indicating varying levels of demand and market positioning.
- Seasonal trends: Sales showed seasonal patterns, with higher demand during certain times of the year.
- Regional performance: Regional variations in sales performance were observed, suggesting potential opportunities for targeted marketing strategies.
- Customer satisfaction: Overall, customers expressed positive satisfaction ratings, indicating a favorable reception of the bikes sold.

👉These insights provide valuable information for decision-making and can guide business strategies, marketing campaigns, and product development efforts.

🎯Conclusion:

🌟The Excel project focused on analyzing bike sales data and presenting key insights using formulas, functions, pivot tables, and charts. The project demonstrated the importance of data cleaning, organization, and visualization in facilitating data analysis and decision-making.

🌟Through data cleaning, duplicate entries were removed, ensuring the accuracy and integrity of the dataset. The organization of data, such as categorizing age groups and converting abbreviations into full forms, improved data readability and comprehension.

🌟The use of pivot tables and charts allowed for a comprehensive visual representation of the data, enabling stakeholders to easily understand sales trends, product performance, and customer satisfaction ratings. The sales dashboard provided a centralized view of the data, aiding in quick analysis and identification of important patterns.

🌟Key insights gained from the project include the popularity of mountain bikes among customers, variations in average sales prices across bike categories, seasonal sales trends, regional sales performance, and positive customer satisfaction ratings.

🌟Overall, the Excel project enhanced my understanding of spreadsheet functionalities, data cleaning techniques, and data visualization capabilities. It emphasized the significance of accurate and well-organized data in driving effective business decisions.

Bike Sales Dashboard:

Bike Sales Dashboard

Marital Status

Married

Single

Region

Europe

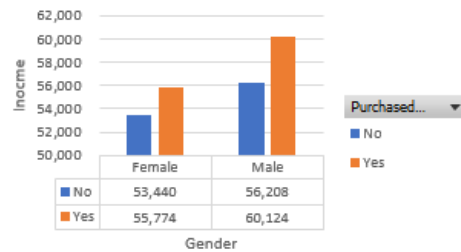North America

Pacific

Education

Bachelors

Graduate Degree

High School

Partial College

Partial High School

Average of Income

Avg Income Per Purchase

	Female	Male
No	53,440	56,208
Yes	55,774	60,124

Gender

Purchased...
- No
- Yes

Gender ▼

Count of Purchased Bike

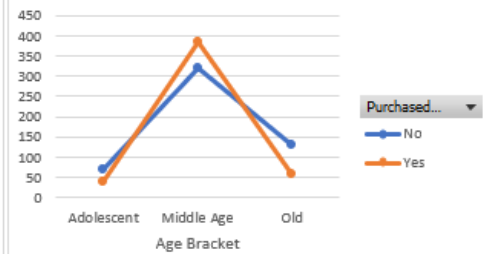## Customer Age Bracketst

Age Bracket: Adolescent, Middle Age, Old

Purchased...
- No
- Yes

Chart Area

Count of Purchased Bike

Customer Commute

Commute Distance: 0-1 Miles, 1-2 Miles, 2-5 Miles, 5-10 Miles, More then 10 Miles

Purchased...
- No
- Yes

Chart Area