# Bike Sales Analysis

# Bike Dekho Excel Internship Project

## Objective

To analyse customer demographics and behavioural patterns influencing bike purchases using Excel tools such as Pivot Tables, Charts, and Dashboards.

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## Data Cleaning & Preparation

- Removed duplicate records
- Replaced missing values in key fields (e.g., Gender, Region)
- Ensured consistent formatting across categorical columns like Occupation, Education, and Commute Distance
- Created calculated fields for region-level and product-level summaries

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## Key Insights from Charts & Pivot Tables

## Bike Sales and Demographic Insights

### 1. Region Wise Sales Data

- **North America** leads with the **highest bike sales**, significantly ahead of Europe and the Pacific.
- **Europe** shows moderate sales.
- **Pacific** has the **lowest bike sales**, indicating a potential market with untapped demand or low interest.

*Implication*: Targeted marketing in Pacific and Europe could improve sales. North America should continue to be leveraged as a primary market.

### 2. Age-wise Purchase Behaviour

- Buyers aged **27 and 30** show the **highest purchasing behaviour**.
- Very low purchases are seen in the **25–26** age range.
- A rising trend is visible from age 26 to 30, with a dip around 28–29.

*Implication*: Marketing campaigns should focus on the **27–30 age groups**, possibly due to financial independence and lifestyle changes.

### 3. Gender-Based Income Analysis

- Individuals with incomes between **$60,000–$80,000** are the **most common purchasers** across both genders.
- Very few bike buyers are from the **high-income bracket** ($130,000+).

*Implication*: Bikes seem to be a middle-income lifestyle product. Brands can focus on affordability and features for this income segment.

### 4. Educated/Occupied vs. Luxury (Cars, Homes, Bikes)

- **Bachelor's and Graduate degree holders** are the dominant bike purchasers.
- These individuals are also more likely to own **homes** and **cars**, suggesting financial stability.
- There is a **clear correlation** between education, occupation, and the purchase of luxury items.

*Implication*: Education level is a key segment predictor. Highly educated individuals are more receptive to luxury or lifestyle products.

### 5. Commute Distance by Region

- **North America** accounts for the **largest commute distances**, followed by Europe.
- **Pacific** has the smallest share in commute, aligning with its low sales.

*Implication*: Commuting needs may drive bike purchases in North America and Europe. Pacific may have alternate transport options or urban proximity.

### 6. Combined Dashboard Filters (Gender, Marital Status, Purchase Behaviour)

- **Filtered views** highlight buyer personas:
    - **Married males** are more likely to purchase.
    - There's clear evidence of interaction between **demographics and buying decisions**.

*Implication*: Personalized promotions based on demographic filters (like targeting married males) can increase conversion rates.

## Summary Insights

- **Top Market**: North America (based on sales & commute).
- **Ideal Buyer**: 27–30 years old, middle-income, educated, possibly married male.
- **Lagging Region**: Pacific (needs targeted marketing).
- **Opportunity**: Explore higher-income or low-participation age groups (25–26) with tailored offerings.

# Dashboard Summary

## Excel dashboard includes:

- **Slicers for Marital Status, Gender, and Purchase Status**
- **Pie charts** showing regional breakdown of commute distance
- **Bar and Line charts** summarizing:
  - Gender income disparity
  - Region-wise sales
  - Education's influence on assets
  - Age and purchase correlation

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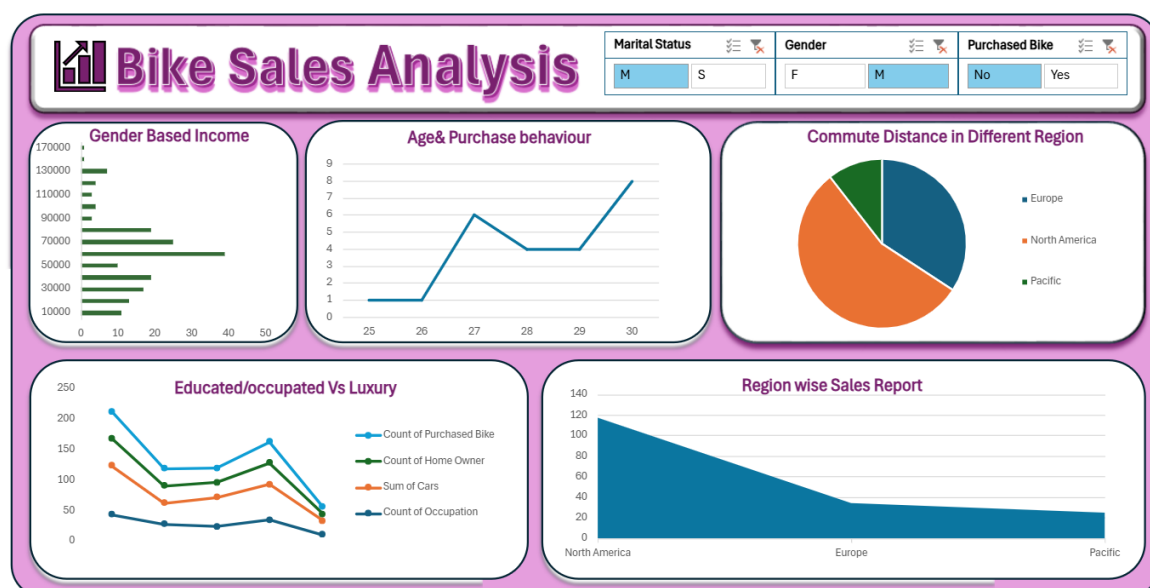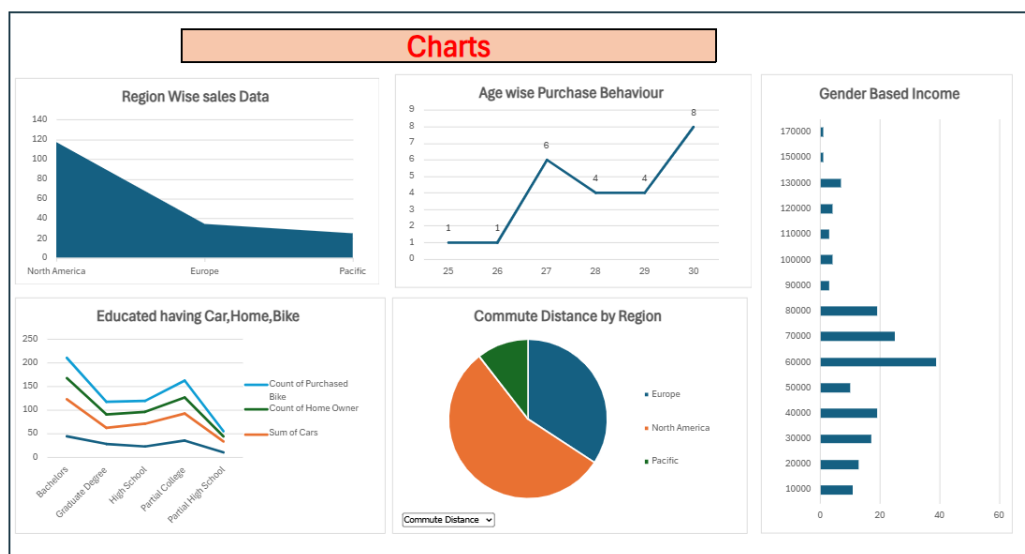
## Tools Used

- Microsoft Excel
- Pivot Tables
- Slicers
- Line, Bar, and Pie Charts

I have included chart visual and dashboard report with the insight file