Insights Documentation Report

Project Title: Bike Dekho / Bike Buyers Data Analysis & Dashboard
Prepared By: Vaibhavi Venugopal Sunki
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1. Introduction

The purpose of this project was to analyze the Bike Buyers Dataset using Microsoft Excel. The workflow included data cleaning, exploratory data analysis (EDA), visualization, and dashboard creation. The final outcome provides actionable insights into customer demographics, product preferences, and sales trends.

2. Data Cleaning & Preparation

Steps performed to clean and standardize the dataset:
- Removed 26 duplicate rows - Checked and handled missing values (none found) - Standardized formats.Created calculated fields (Age group, Income group, Flag purchased.

3. Exploratory Data Analysis (EDA)

Performed EDA using PivotTables and Excel formulas. PivotTables analyzed: - Sales by gender, region, and product category - Preferred bike models across demographics - Income and occupation influence on bike purchases Formulas used: COUNTIFS,,AVERAGE ,COUNTA

4. Data Visualization & Dashboard

The findings were represented through charts and an interactive dashboard. Charts Created: Bar/Column charts → Sales by region & gender - Pie charts → Breakdown by marital status, gender, product line - Line charts → Time-based sales trends - Heatmap → Occupation vs. Income group Dashboard Features: - KPIs: Total Sales, Units Sold, Avg. Income, Customer Count Segmentation via slicers (Region, Gender, Marital Status, Product Line) - Professional design with color coding for clarity.

 Chart 1: Purchases by Gender & Region "This chart shows how bike purchases vary across regions and between genders. For example, males in the Pacific region have higher purchase rates."

 Chart 2: Income vs. Occupation (Heatmap)
"The heatmap highlights the relationship between customer income groups and their occupations. Darker shades indicate higher concentration of customers in that category."

 Chart 3: Purchases by Age Group
"This shows which age groups are more likely to purchase bikes. For instance, middle-aged customers (31–50) purchase more compared to younger/older groups."

 Chart 4: Commute Distance Impact
"This chart shows the effect of commute distance on bike purchases. Customers with shorter commutes tend to purchase more."

5. Business Insights

Key takeaways from the analysis: 1. Married males aged 30–45 with higher income are the most frequent bike buyers 2. The Western region recorded the highest sales volume 3. Income and occupation strongly influence purchase decisions

6. Conclusion

This project demonstrates end-to-end data analysis in Excel: cleaning, EDA, visualization, and dashboarding. The results help decision-makers quickly understand customer patterns and improve sales strategies.