# Bike Sales Project

Project link:

- **Problem Statement:** The objective is to find out what makes people buy bikes. We will look at how gender and income affect sales, whether travel distance matters, and which age groups are the biggest buyers.

**Data Source & Methodology**

- **Source:** Customer dataset (1,000+ records) sourced via GitHub.
- **Tools:** Microsoft Excel (Web Version).
- **Process:**
  - **Data Hygiene:** Removed duplicate entries and standardized fields (e.g., converting "M/F" to "Male/Female").
  - **Formatting:** Converted income data to currency and eliminated decimal redundancies for cleaner visualization.
  - **Data Transformation:** Employed nested IF statements to categorize ages into "Young Adult," "Middle Age," and "Old."
  - **Analysis:** Utilized Pivot Tables to aggregate data and Excel Slicers to create an interactive dashboard for multi-dimensional analysis.

| Average of Income | Purchased Bike | | |
|---|---|---|---|
| Gender | No | Yes | Grand Total |
| Female | $53,440 | $55,774 | $54,581 |
| Male | $56,208 | $60,124 | $58,063 |
| Grand Total | $54,875 | $57,963 | $56,360 |

| Count of Purchased Bike | Purchased Bike | | |
|---|---|---|---|
| Commute Distance | No | Yes | Grand Total |
| 0-1 Miles | 166 | 200 | 366 |
| 1-2 Miles | 92 | 77 | 169 |
| 2-5 Miles | 67 | 95 | 162 |
| 5-10 Miles | 116 | 76 | 192 |
| More than 10 Miles | 78 | 33 | 111 |
| Grand Total | 519 | 481 | 1000 |

| Count of Purchased Bike | Purchased Bike | | |
|---|---|---|---|
| Age Bracket | No | Yes | Grand Total |
| Adolescents | 71 | 39 | 110 |
| Middle Aged | 318 | 383 | 701 |
| Old Age | 130 | 59 | 189 |
| Grand Total | 519 | 481 | 1000 |
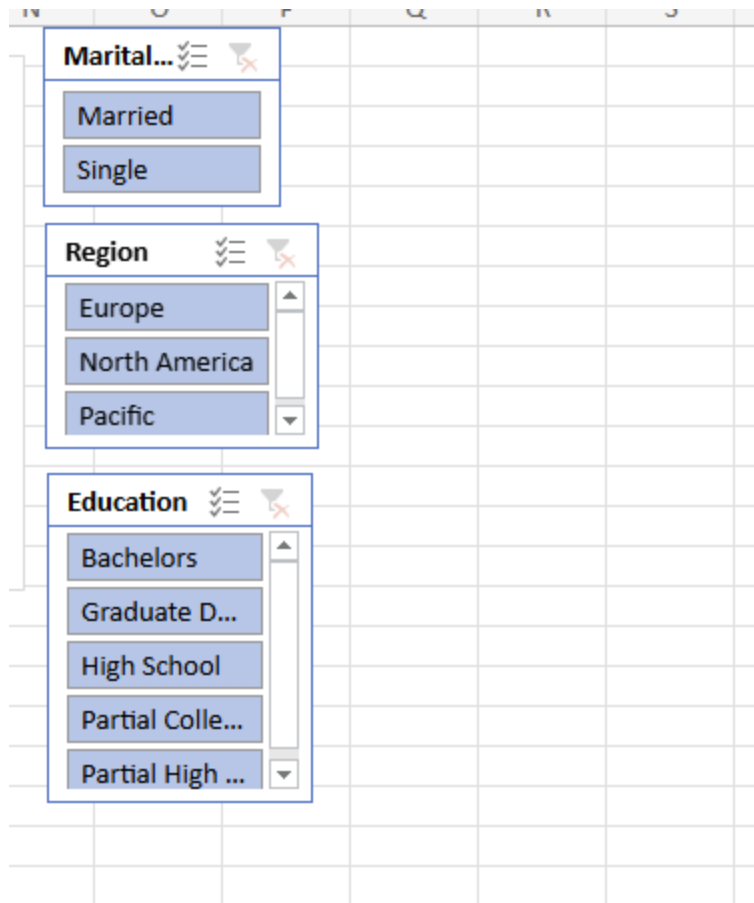
## Key Findings

- **Income, Occupation and Gender:** High-income male professionals (averaging $55k+) demonstrate the highest purchasing rates.
- **Commute Patterns:** Customers with short commutes (0–1 miles) are the most frequent buyers, suggesting bikes are used for "last-mile" transport or local leisure.
- **Age:** The "Middle Age" category represents the largest market segment.

# Bike Sales Dashboard

### Average Income by Gender (Bike purchase)

| Gender | No | Yes |
|--------|--------|--------|
| Female | $53,440 | $55,774 |
| Male | $56,208 | $60,124 |

### Bike purchase per Age Bracket

Age Bracket: Adolescents, Middle Aged, Old Age (No, Yes)

### Purchased bike per Commute Distance

Commute Distance: 0-1 Miles, 1-2 Miles, 2-5 Miles, 5-10 Miles, More than 10 Miles (No, Yes)
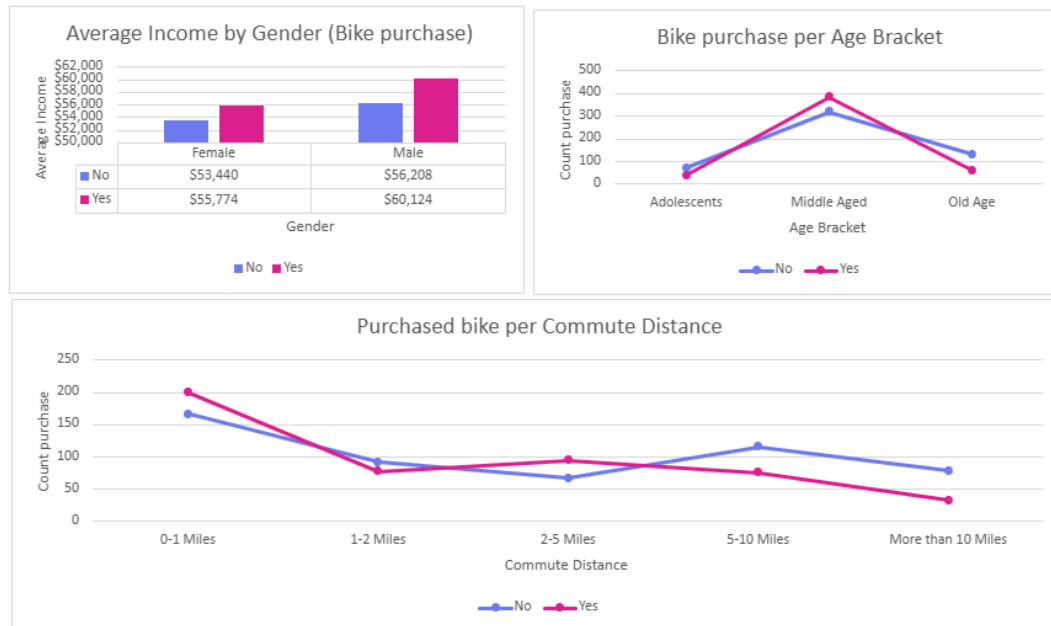
**Business Impact & Recommendations**

- **Strategic Marketing:** Focus on digital advertising spending on high-income homeowners within the identified "Middle Age" bracket.
- **Product Bundling:** Promote commuter-friendly accessories (lights, locks, baskets) to the 0–1 mile commute segment.