



THE INSIGHTS

CUSTOMER SEGMENTATION & CLUSTERING

DEMOGRAPHICS

Gender

- Both male and female customers are represented.
- The dataset includes a **slight skew towards female customers**, though both genders are present across all income and spending clusters.

Age

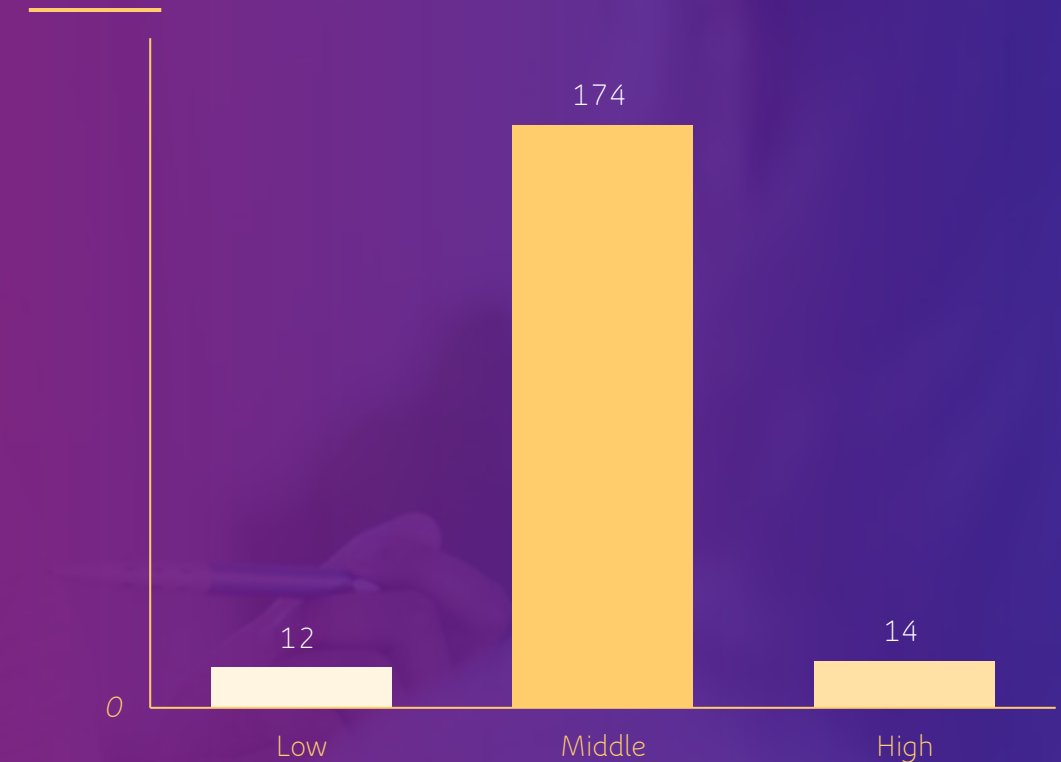
- Age range: **18 to 70**, with a broad representation of different age groups.
- A higher concentration of **younger customers (20-30)** with a relatively higher spending tendency.
- **Older customers (50-70)** tend to have lower spending, with some exceptions where they show high incomes but moderate spending.

DEMOGRAPHICS

Annual Income

- Customers range from low-income (under \$20k) to high-income (above \$100k).
- Low-income clusters are typically found at the bottom end of the income range.
- Higher-income clusters are observed above \$100k, with many customers in the \$50k to \$70k range.

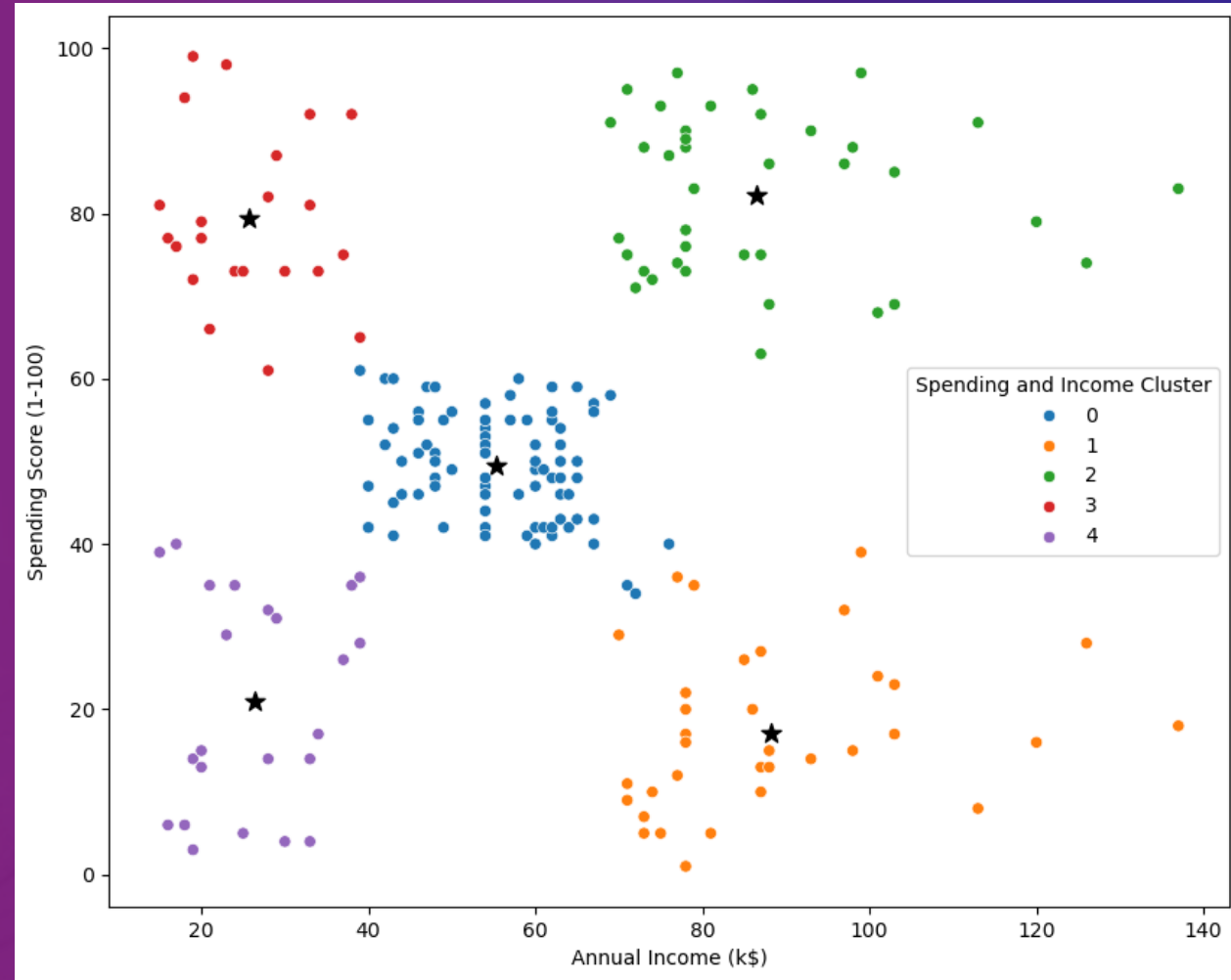
Number of People in Each Income Range



CLUSTER ANALYSIS INSIGHTS

We Have 5 Clusters:

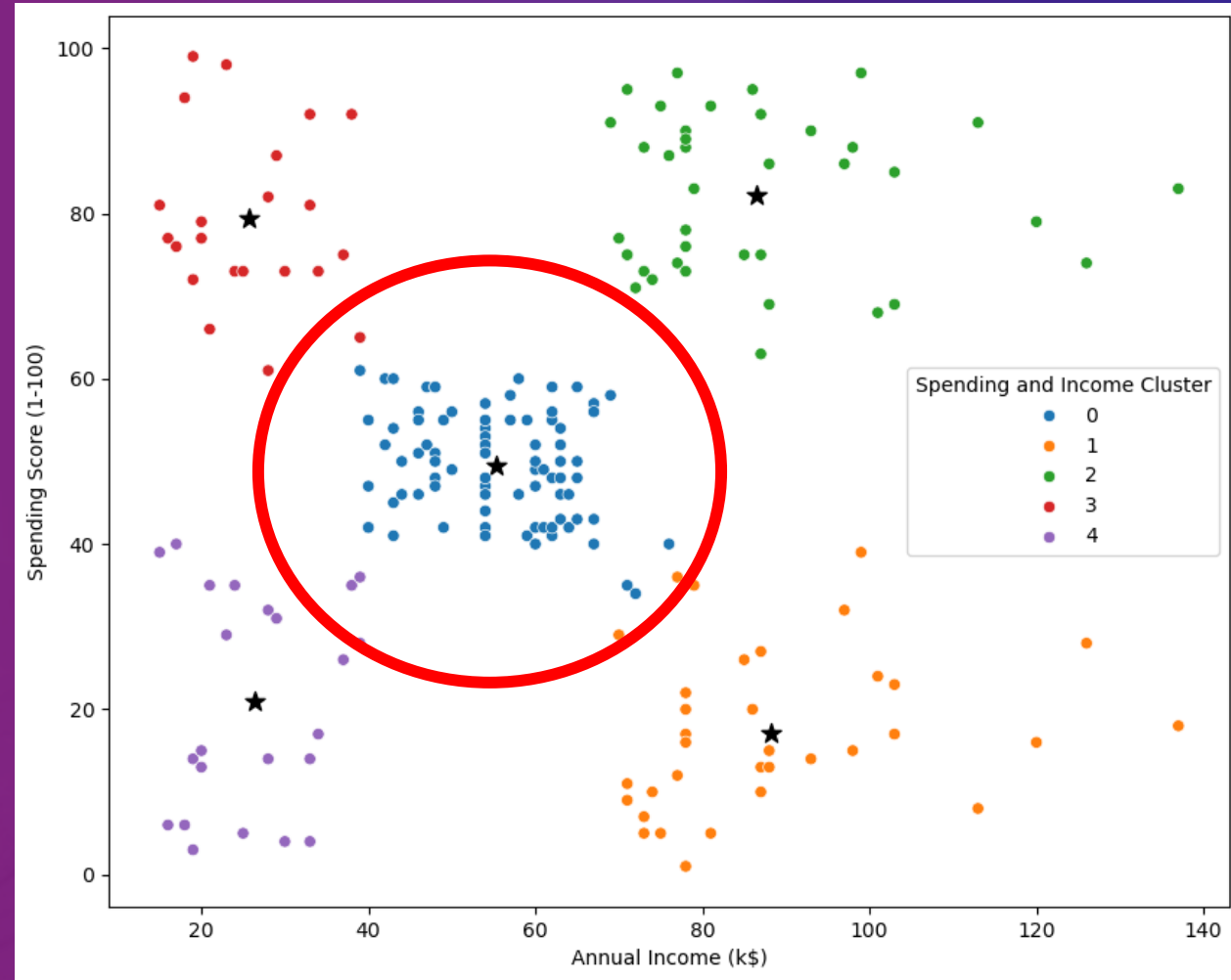
1. Cluster 0 (Blue) - Balanced
2. Cluster 1 (Orange) - High-Income, Low-Spending Group
3. Cluster 2 (Green) - High-Income, High-Spending Group
4. Cluster 3 (Red) - Low-Income, High-Spending Group
5. Cluster 4 (Purple) - Low-Income, Low-Spending Group



CLUSTER ANALYSIS INSIGHTS

Cluster 0 (Blue) – Balanced:

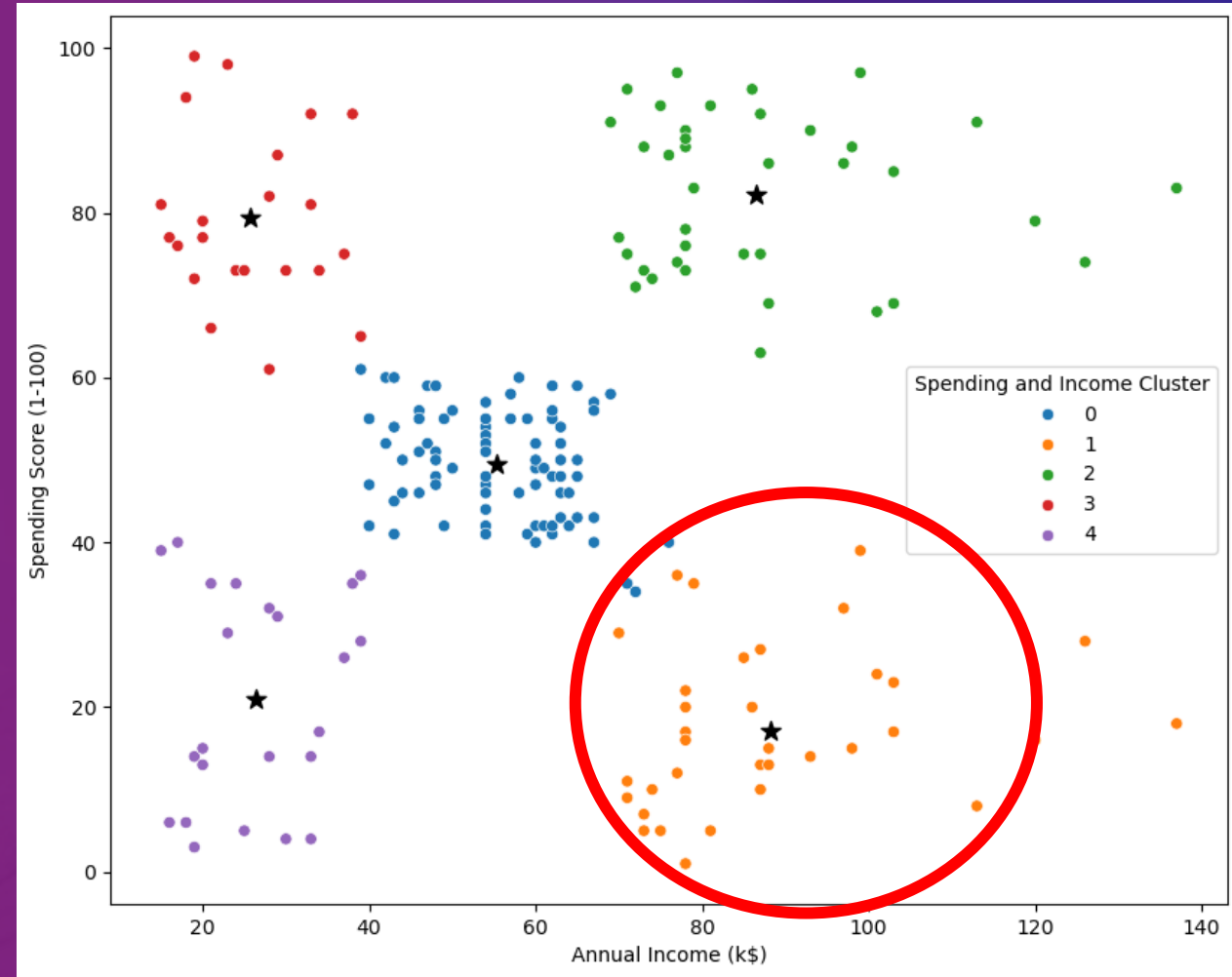
- Demographics: 59% Female, 41% Male.
- Age: Average age of 42.7 years.
- Income & Spending: Moderate annual income (\$55.3k) and spending score (49.5).
- Position on Plot: Central cluster, showing balanced consumer behavior.



CLUSTER ANALYSIS INSIGHTS

Cluster 1 (Orange) - High-Income, Low-Spending Group:

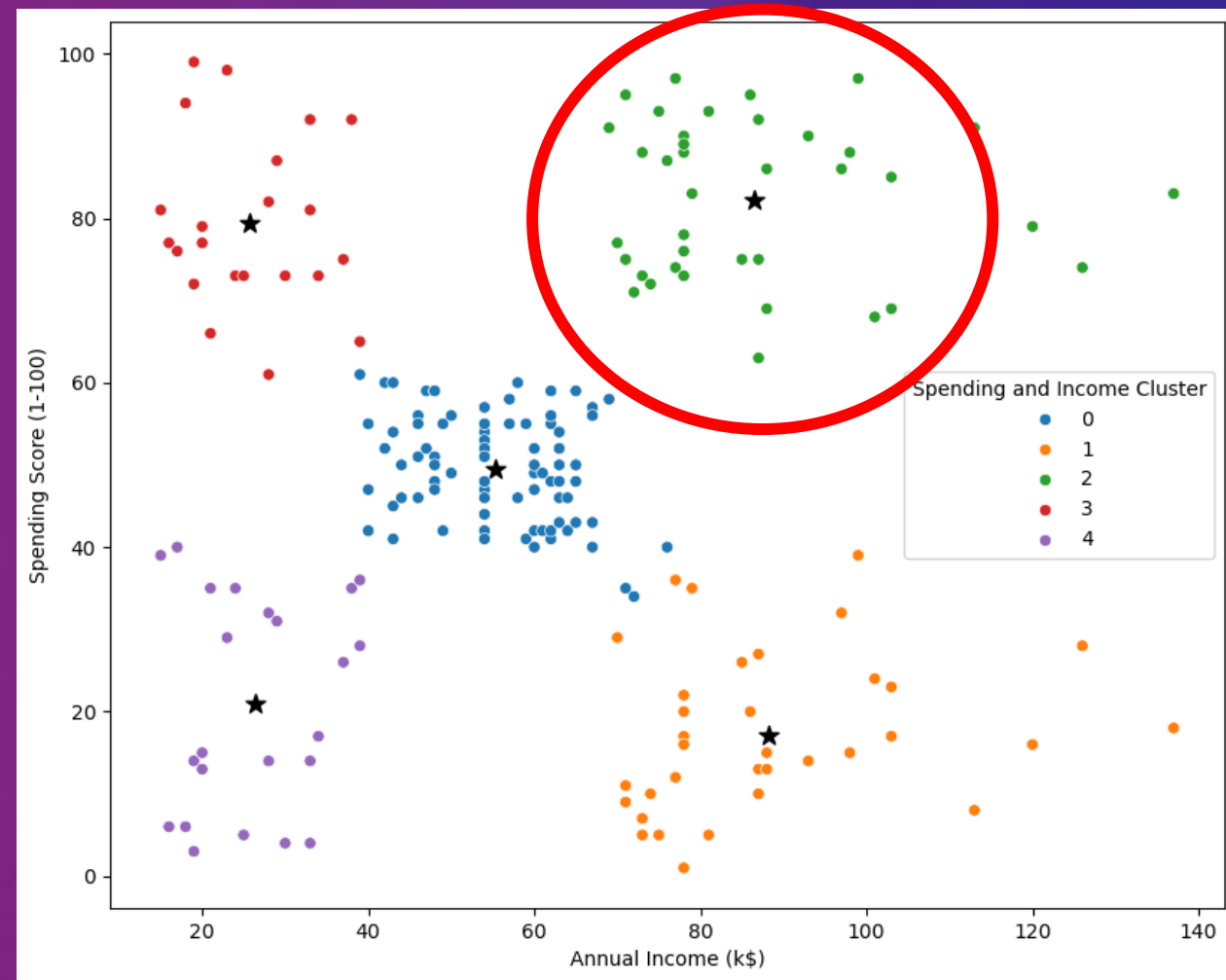
- Demographics: 46% Female, 54% Male.
- Age: Average age of 41.1 years.
- Income & Spending: High income (\$88.2k) but low spending score (17.1).
- Position on Plot: Bottom-right, indicating financial conservatism despite high earning.



CLUSTER ANALYSIS INSIGHTS

Cluster 2 (Green) - High-Income, High-Spending Group:

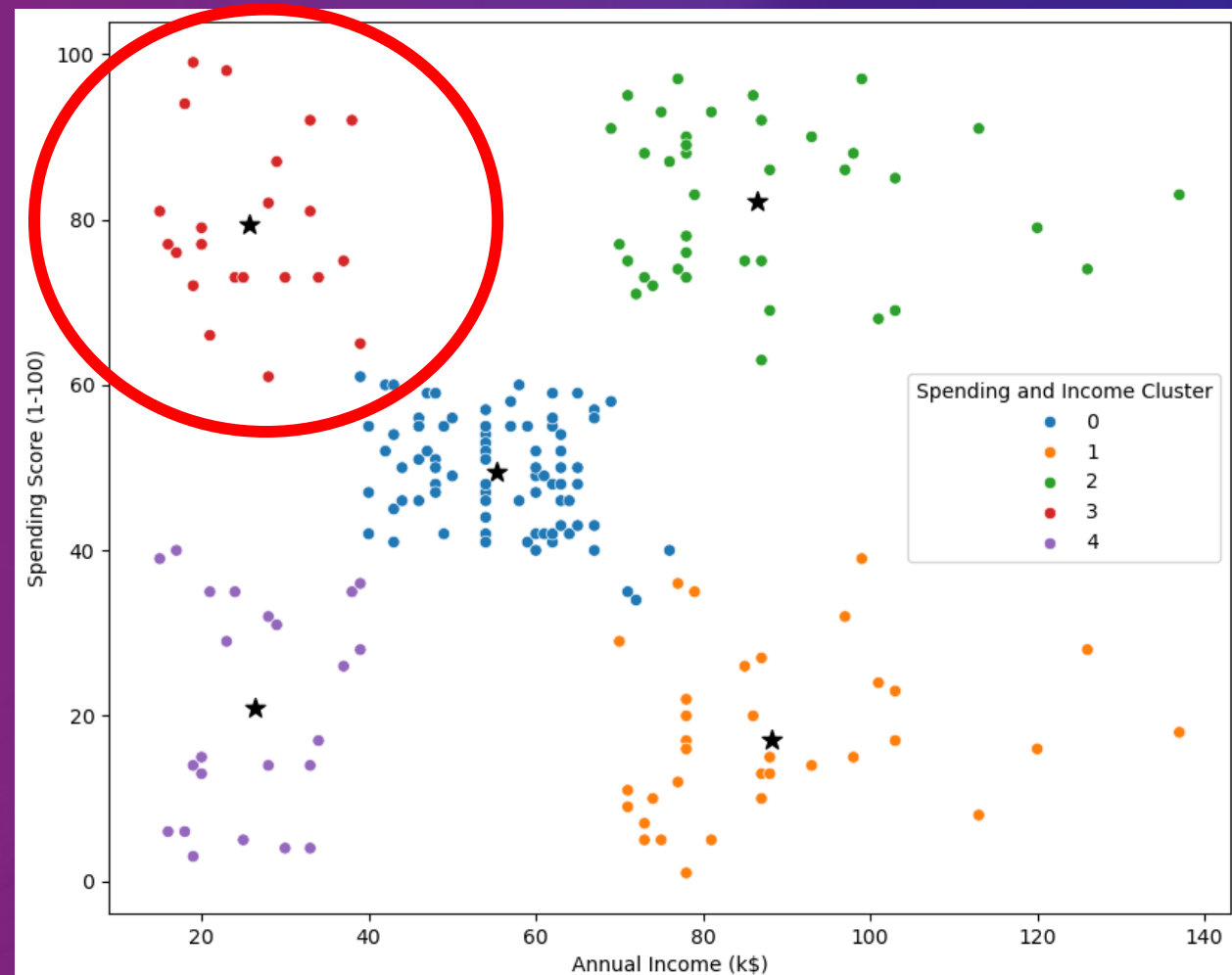
- Demographics: 54% Female, 46% Male.
- Age: Younger average of 32.7 years.
- Income & Spending: High income (\$86.5k) and high spending score (82.1).
- Position on Plot: Top-right, representing affluent and active spenders.



CLUSTER ANALYSIS INSIGHTS

Cluster 3 (Red) - Low-Income, High-Spending Group:

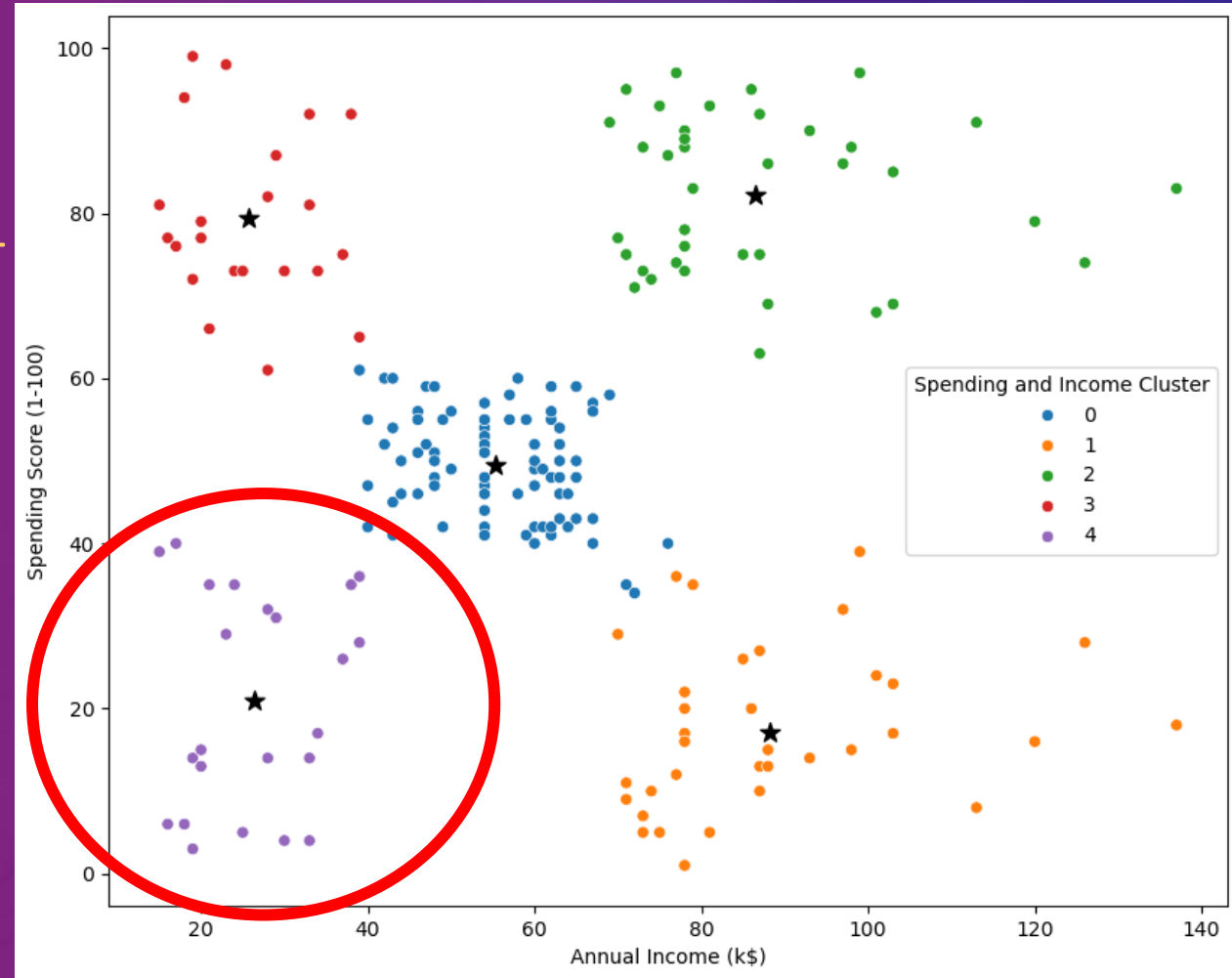
- **Demographics:** 59% Female, 41% Male.
- **Age:** Youngest group with an average age of 25.3 years.
- **Income & Spending:** Low income (\$25.7k) but high spending score (79.4).
- **Position on Plot:** Top-left, indicating impulsive spending behavior.



CLUSTER ANALYSIS INSIGHTS

Cluster 4 (Purple) - Low-Income, Low-Spending Group:

- Demographics: 61% Female, 39% Male.
- Age: Older average of 45.2 years.
- Income & Spending: Low income (\$26.3k) and low spending score (20.9).
- Position on Plot: Bottom-left, representing financially conservative and budget-conscious consumers.



KEY OBSERVATIONS

Income and Spending Correlation

- Clusters 2 (Green) and 3 (Red) display contrasting spending behaviors at similar income levels.
- Clusters 1 (Orange) and 4 (Purple) have conservative spending habits despite income differences.

Age Distribution

- Younger consumers (Cluster 3) show high spending irrespective of income.
- Older consumers (Clusters 0 and 4) are more balanced or conservative.

Strategic Recommendations

- Target **Cluster 2** (High-Income, High-Spending) for **premium product marketing.**
- Explore **promotional strategies** to engage **Cluster 3** (Low-Income, High-Spending) and convert impulsive buyers **into loyal customers.**
- **Design cost-effective products** for **Cluster 4** (Low-Income, Low-Spending) to meet their budget constraints.