

# Insights Report on customer behavior by cluster

The dataset contains information on 200 customers, with the following columns:

1. **CustomerID** – Unique identifier for each customer
2. **Gender** – Male or Female
3. **Age** – Age of the customer
4. **Annual Income (k\$)** – Annual income in thousands
5. **Spending Score (1–100)** – A score assigned by the mall based on customer spending behavior

Here's the **Insights Report on Customer Behavior by Cluster** (based on Annual Income and Spending Score):

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## Cluster 0 – Middle Income, Average Spenders

- **Customer Count:** 81
- **Profile:** Mostly females, average age ~43.
- **Annual Income:** Mid-range (avg \$55k).
- **Spending:** Moderate (avg score ~50).
- **Behavior Insight:** Balanced income and spending habits, likely steady but not extravagant shoppers.

## Cluster 1 – High Income, Low Spenders

- **Customer Count:** 35
- **Profile:** Mostly males, average age ~41.
- **Annual Income:** High (avg \$88k).
- **Spending:** Very low (avg score ~17).
- **Behavior Insight:** Wealthy but cautious spenders; may be more savings-focused or selective buyers.

## Cluster 2 – Low Income, Low Spenders

- **Customer Count:** 23
- **Profile:** Mostly females, average age ~45.
- **Annual Income:** Low (avg \$26k).
- **Spending:** Low (avg score ~21).
- **Behavior Insight:** Budget-conscious customers with limited purchasing power; likely seek discounts.

## Cluster 3 – Low Income, High Spenders

- **Customer Count:** 22
- **Profile:** Mostly females, young (avg age ~25).
- **Annual Income:** Low (avg \$26k).
- **Spending:** High (avg score ~79).

- **Behavior Insight:** Young, aspirational spenders willing to splurge despite lower incomes; brand-driven.

#### Cluster 4 – High Income, High Spenders

- **Customer Count:** 39
- **Profile:** Mostly females, average age ~33.
- **Annual Income:** High (avg \$87k).
- **Spending:** Very high (avg score ~82).
- **Behavior Insight:** Affluent and enthusiastic shoppers; prime targets for luxury and premium brands.