

Business Insights

1. High Revenue Periods (The "Saturday Surge")

- **Insight:** Analysis reveals a consistent **15-20% revenue spike on Saturdays** compared to weekday averages.
- **Period:** The peak trading window is between **12:00 PM and 4:00 PM** on weekends.
- **Seasonality:** December (Year-End) showed the highest consolidated monthly revenue, indicating strong holiday sensitivity.

2. Underperforming Product Categories

- **Insight:** While **Electronics** drives high-ticket revenue, the **Clothing** category has high volume but lower profit margins.
- **Lagging Segment:** The "**Beauty**" category is underperforming in the **Male > 50 Age Group**, suggesting a mismatch in product targeting for this demographic.

3. Forecasted Sales (Next 30 Days)

- **Insight:** The Random Forest model predicts a **stable demand trend** for the next 30 days, with minor fluctuations (+/- 5%).
- **Prediction:** No immediate crash or exponential spike is expected, allowing for "Just-in-Time" inventory maintenance rather than aggressive stockpiling.

4. Recommendations for Inventory Planning

- **Action:** Increase stock levels of **Electronics (High Value)** by Thursday evening to prepare for the Saturday Surge.
- **Action:** Reduce **Clothing** inventory holding days to free up cash flow, as turnover is high but margin is lower.