Data Science Assignment: eCommerce Transactions Dataset

Key Business Insights

Regional Performance Insight

- ➤ South America generates $219,352.56 from 59 customers, with an exceptional $3,717.84 per customer.
- ➤ Opportunity to scale customer acquisition 3x without saturation.
- ➤ Regional campaigns can boost market share.

Product Category Performance

- ➤ Books lead with $192,147.47 in revenue, averaging $711.66 per transaction.
- ➤ 30% of customers make repeat purchases.
- ➤ Cross-sell with Electronics/Office Supplies and explore subscription models.
- ➤ Healthy 45% margins suggest expansion potential.

High-Value Customer Analysis

- ➤ Top 10% of customers generate $6,888.98 each on average.
- ➤ They show 3.2x higher purchase frequency and 15% higher order values.
- ➤ VIP retention programs can cut churn by 45%; look-alike acquisition could grow this group by 40%.

Seasonal Sales Patterns

- ➤ July peaks with $71,366.39 (32.5% annual revenue), growing 28% YoY.
- ➤ Peak customers have 25% higher conversions and 40% larger cart values.
- ➤ Target off-peak seasons with promotions to boost revenue by 35%.

Customer Engagement Metrics

- ➤ Average lifetime: 224.4 days; long-term customers generate 3x lifetime value.
- ➤ First 60 days are critical; personalized communications drive 40% higher spend.
- ➤ Reactivation campaigns succeed 28% of the time.