1. **High-Level Business Summary**

**Dataset Stats:**

| **Metric** | **Value** |
| --- | --- |
| Total Orders | 98,666 |
| Total Customers | 95,420 |
| Repeat Customers | 2,997 (~3.1%) |
| Total Revenue | $15,843,553.24 |
| Average Delivery Time | 12 days |

**Insight:**

* Most customers are **one-time buyers**, indicating an opportunity for **customer retention programs**.
* Revenue per order = $15,843,553.24 ÷ 98,666 ≈ **$160.54 per order**.
* Average delivery time of 12 days is decent, but **late deliveries correlate with low reviews**, so logistics optimization can directly impact customer satisfaction.

# 2. ****Delivery vs Review Insights:****

| **Delivery Status** | **Orders** | **Average Review score** |
| --- | --- | --- |
| Late | 6,310 | 2 |
| On-time | 88,559 | 4 |

**Insights:**

* **6.4% of deliveries are late** (6,310 ÷ 98,666).
* Late deliveries have **50% lower ratings** than on-time deliveries → **direct negative impact on brand reputation**.
* Business Action: Use **SQL to track late deliveries by seller or category**, then write queries to flag problem sellers or regions.

**Recommendation:**

* Optimize **logistics, route planning, and warehouse management**.
* Notify customers proactively of delays → improve experience and reduce negative reviews.

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# 3️. Payment ****Insights:****

# **Insights:**

* **Credit cards dominate** (74% of payments). Could offer **instalment promotions** to increase basket size, **also have the highest average payment** ($163.32).
* **Boleto** is 19%, slower and less convenient.
* Only 1.5% use debit card, indicating preference for **credit-based payments in this market**.
* Voucher usage is low (~6%) but tends to cover **low-value orders**, average $65.7.

**Recommendation:**

* Encourage **credit card adoption** for high-value orders.
* Launch **voucher campaigns** to boost low-value product sales

# 4️. ****Revenue & Category Insights:****

**Insights:**

* **Top revenue drivers:** Beauty & Health + Watches & Gifts (~$2.46M combined).
* Home & Bath has the **highest orders** but lower revenue than Beauty & Health.
* Categories like Tools & Garden and Cool Stuff have **smaller revenue**: opportunities for **promotions, bundling, or upselling**.
* Watches & Gifts have **highest average revenue per order ($201)**: luxury/premium segment.
* Furniture & Home Utilities are low average revenue → possible **cross-sell or upsell opportunities**.

# 5️. ****Seller Insights (Profit Focus)****

**Insights:**

* Top 2 sellers contribute **~13% of total top-10 profit** → consider **incentives or featured promotions**.
* Bottom sellers (in top-10) have less than half profit of top seller.
* Top 10 sellers contribute ~$1.55M profit → high concentration of revenue among **top performers**.
* Potential to **mentor mid-tier sellers**, improve their profitability, or expand top sellers’ product range.

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# 6️. ****Customer Ratings Distribution****

**Insights:**

* Most customers are satisfied (77% ≥ 4 stars), but **11.4% 1-star reviews** indicates areas for improvement.
* Combine with **late delivery info** can **quantify the impact of logistics on negative reviews**.
* Focus on **late delivery orders**, **product quality**, or **customer support** for these negative ratings.

# 7️. ****Repeat Customer Analysis****

* Repeat customers: 2,997
* Total customers: 95,420
* **Repeat customer rate = 3.1%**

**Insights:**

* Very low retention → e-commerce business **losing recurring revenue**.
* Opportunity: **loyalty program, subscription model, or targeted campaigns**.

### **Key Takeaways & Actionable Recommendations:**

1. **Customer Retention:** Only 3.1% repeat purchases: launch loyalty programs or personalized campaigns.
2. **Delivery Optimization:** Late deliveries hurt ratings: optimize logistics and proactively communicate delays.
3. **Payment Strategy:** Credit card dominates: consider credit-based offers or instalments plans.
4. **Revenue Focus:** Promote **top-performing categories** (Beauty & Health, Watches & Gifts) while boosting lower-revenue categories through marketing.
5. **Seller Growth:** Top 10 sellers are major profit drivers: develop strategies to elevate mid-tier sellers.
6. **Ratings & Feedback:** Monitor low reviews (~1–2) : improve customer support and post-purchase follow-ups.