

1. What is the overall distribution of customer review scores?

- ✓ The review scores follow a **positively skewed distribution**. Most customers gave **5-star reviews (57K)**, followed by **4-star (19K)**, while only a small number gave **1-star (11K)** or **2-star (3K)** or **3-star (8k)**.
This indicates an overall **positive customer experience**.

2. How has the average review score trended over time?

- ✓ The average review score has remained **consistently high**, hovering between **4.0 to 4.3**, with minor dips (e.g., December 2016 (2.4) and March 2018 (3.7)).
This shows **stable satisfaction over time**, with no major declines.

3. What is the average review score by state or city?

- ✓ States like **AP, AM, PR, SP** maintain a consistent average of **4.1–4.2**. However, cities like **São Paulo** and **Rio de Janeiro** show **high volumes of negative reviews**, indicating regional service gaps.

4. What's the sentiment breakdown of customer reviews?

- ✓ **Positive reviews: 77%**
Neutral: 8%
Negative: 15%
Most customers express **positive sentiment**, but 15% still reflect dissatisfaction worth investigating.

5. How many customers gave each review score?

- ✓ Exact volume of reviews is clearly represented:
 - 5★ → 57K
 - 4★ → 19K
 - 3★ → 8K
 - 2★ → 3K
 - 1★ → 11K

This allows precise **score distribution analysis**.

6. How does delivery time affect review scores?

- ✓ There is a clear **inverse relationship** — longer delivery times correlate with **lower review scores**.
1-star reviews average **21 days**, while 5-star reviews average **10.6 days** delivery.
⚠ This highlights **delivery delay as a key dissatisfaction driver**.

7. What's the response time for negative reviews?

- ✓ **Response time is fastest for 2-star and 3-star reviews (~2.4 days)**, showing that moderately dissatisfied or neutral customers are responded to most promptly.
1-star reviews receive slightly slower responses (~2.5 days), which may delay resolution for the most dissatisfied customers.
5-star reviews surprisingly have the slowest average response time (~2.6 days), suggesting that positive feedback is deprioritized — which is acceptable, but negative reviews could still be addressed faster.

8. What are the top cities with the highest number of complaints (low scores)?

- ✓ Top complaint-heavy cities:
 - **São Paulo**
 - **Rio de Janeiro**
 - **Belo Horizonte**

These regions should be **targeted for quality improvement and follow-up service actions**.

9. What product categories are receiving poor ratings?

- ✓ Product categories such as:
 - **Security and Services** (Avg: 2.5)
 - **Office Furniture, Fashion (Male & Female),**
 - **Home Comfort, Diapers and Hygiene,**have some of the **lowest average review scores**, ranging from **3.6 to 3.8+**.

This indicates **potential issues in product quality, customer expectations, or delivery experience**, and highlights the need for targeted **product improvement or customer support** in these categories.

10. What is the percentage of 5-star vs 1-star ratings?

- ✓ **5-Star Reviews: 58%**
1-Star Reviews: 12%
While the majority are highly satisfied, the **12% 1-star ratings** suggest a **sizeable group of dissatisfied customers** that should be addressed.