



Team:

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Problem Statement

The goal of this project is to analyze Olist's sales data to determine patterns in order volume and revenue generation



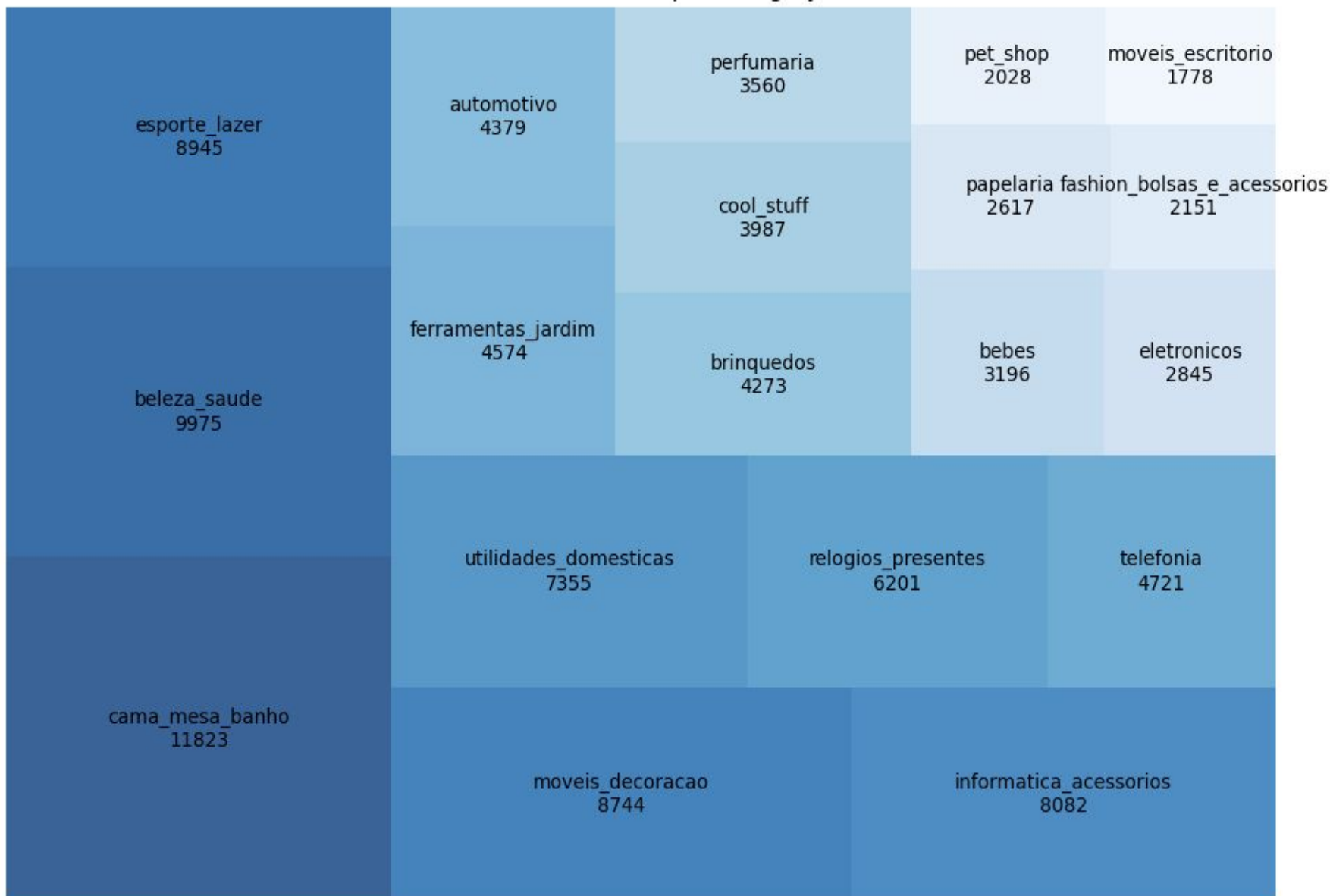
Dataset

Olist Brazilian E-Commerce Dataset

Overview: E-commerce transactions in Brazil (2016–2018).

Includes: Customers, orders, payments, products, sellers, reviews, and logistics.

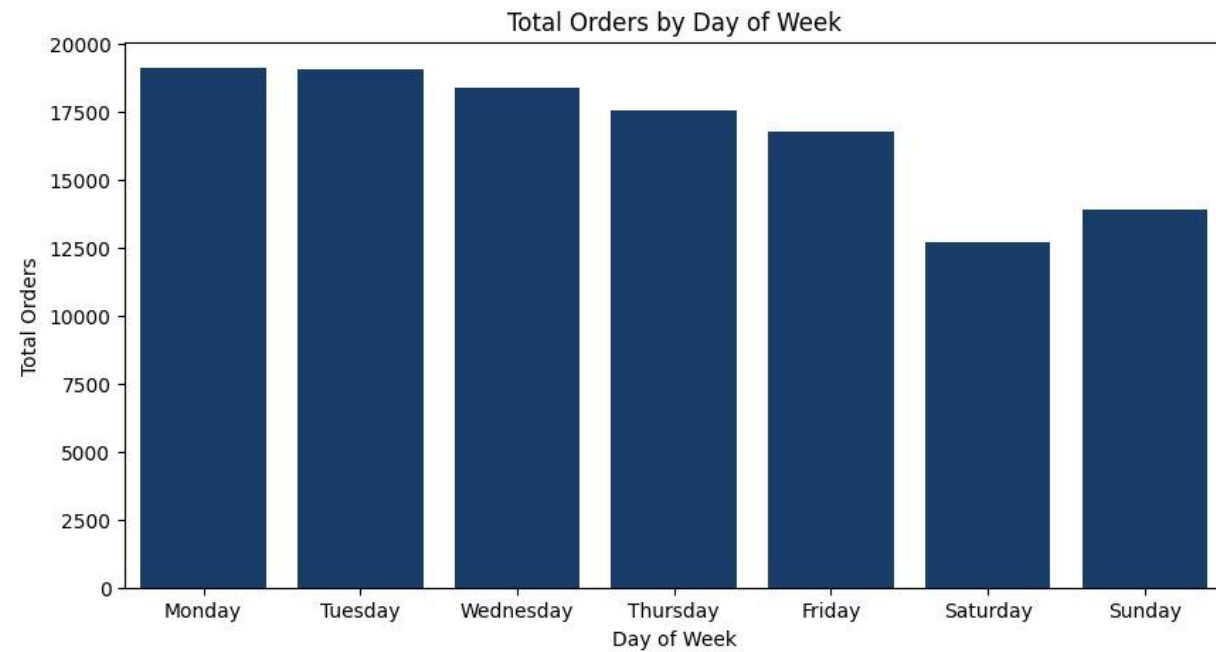
Number of Orders per Category



“Home and personal care products dominate, while specialized categories see lower engagement.”



We see e-commerce orders steadily rise, hitting a peak during Black Friday, driven by massive sales. The overall trend showed strong growth, but that sharp drop at the end isn't a real decline—it's just missing data!



“Afternoons fuel the most orders, while weekends take a dip!”

R\$19.99

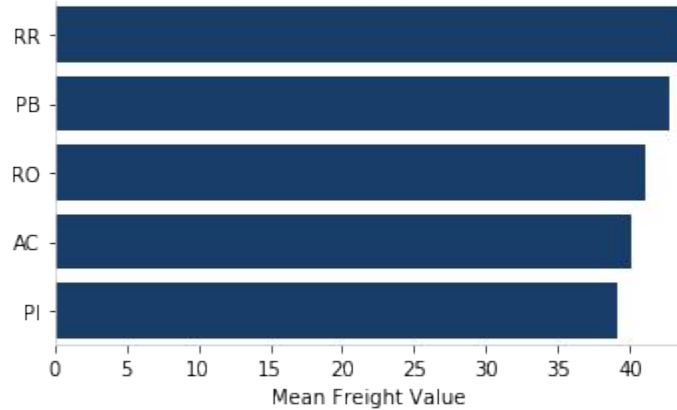
is the mean value of freight paid
for online shopping

8

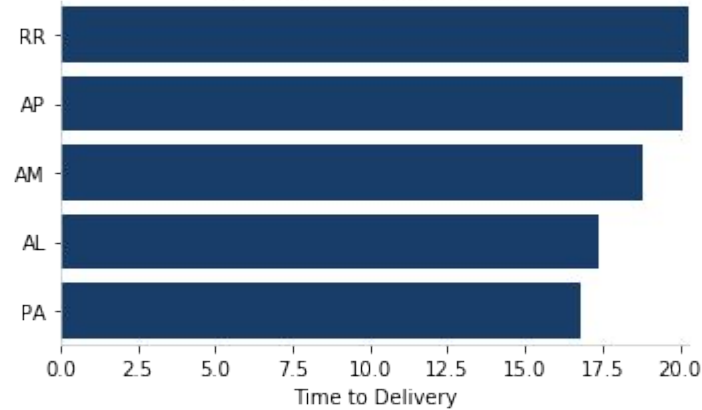
working days

is the average delay for delivery
for online shopping

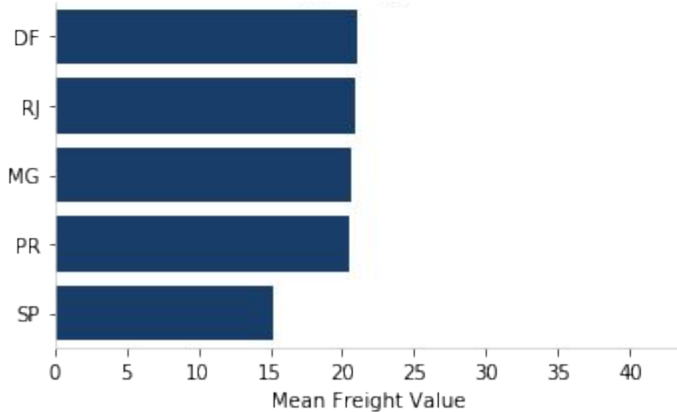
Top 5 States with Highest
Average Freight Value



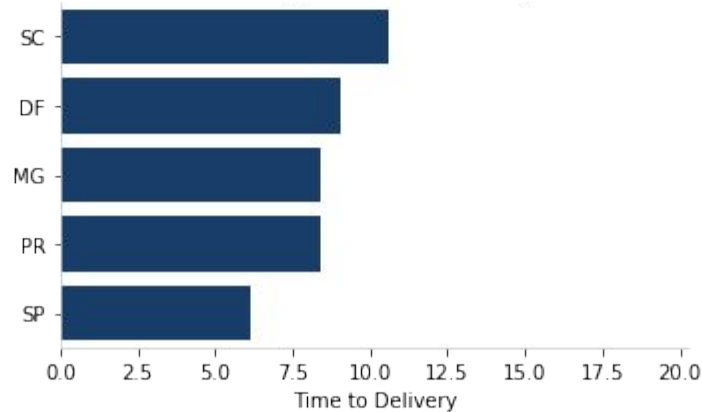
Top 5 States with Highest
Average Time to Delivery



Top 5 States with Lowest
Average Freight Value



Top 5 States with Lowest
Average Time to Delivery



Freight Costs vs Delivery Time:

States with the highest average freight values (like RR and PB) also tend to have longer delivery times, while states with lower freight costs (like DF and RJ) generally have faster delivery times.

Opportunity for Improvement:

There is an opportunity to optimize delivery times in states with high freight costs, as they also have longer delivery delays. Improving logistics efficiency in these regions could enhance customer satisfaction while potentially reducing costs.

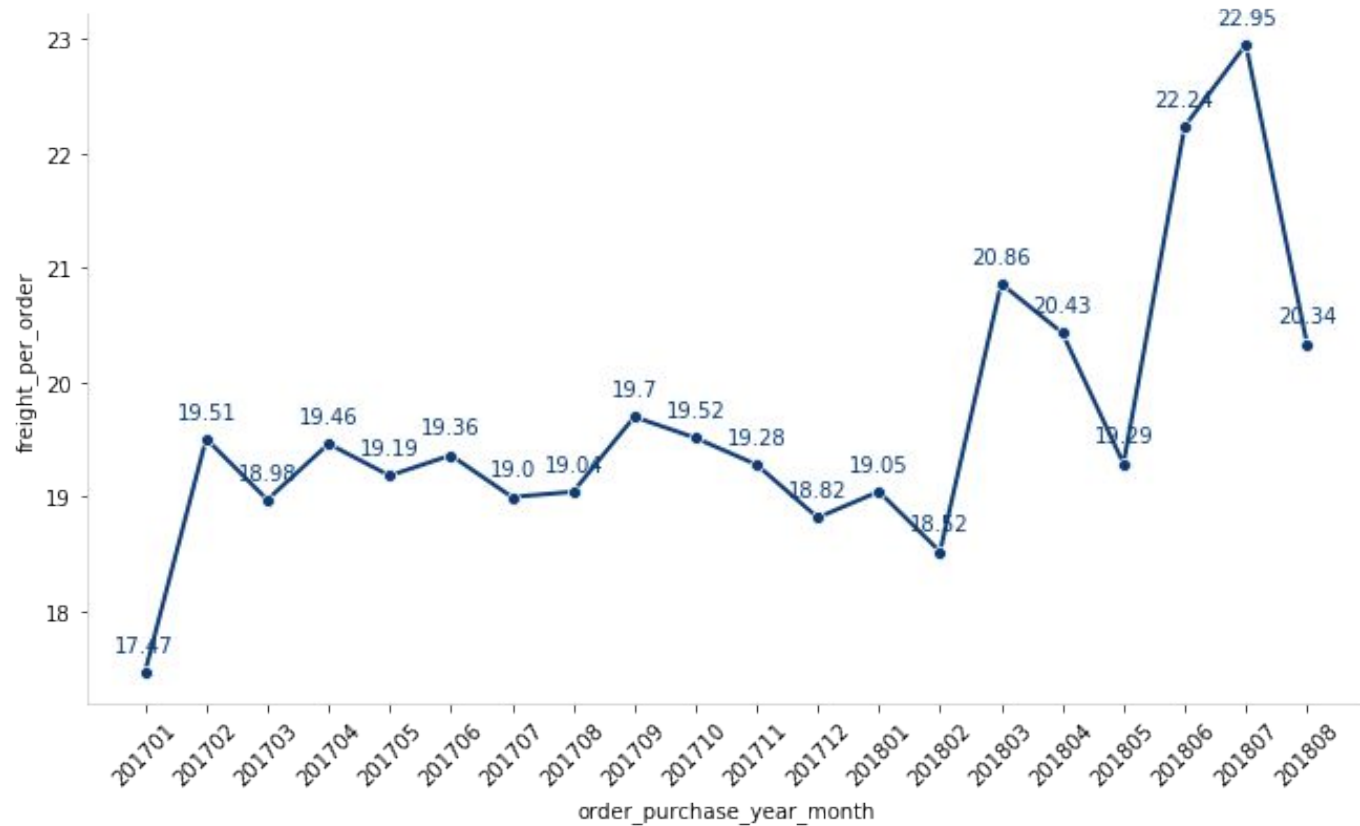
R\$3.11M

total amount sold in 2017
between January and August

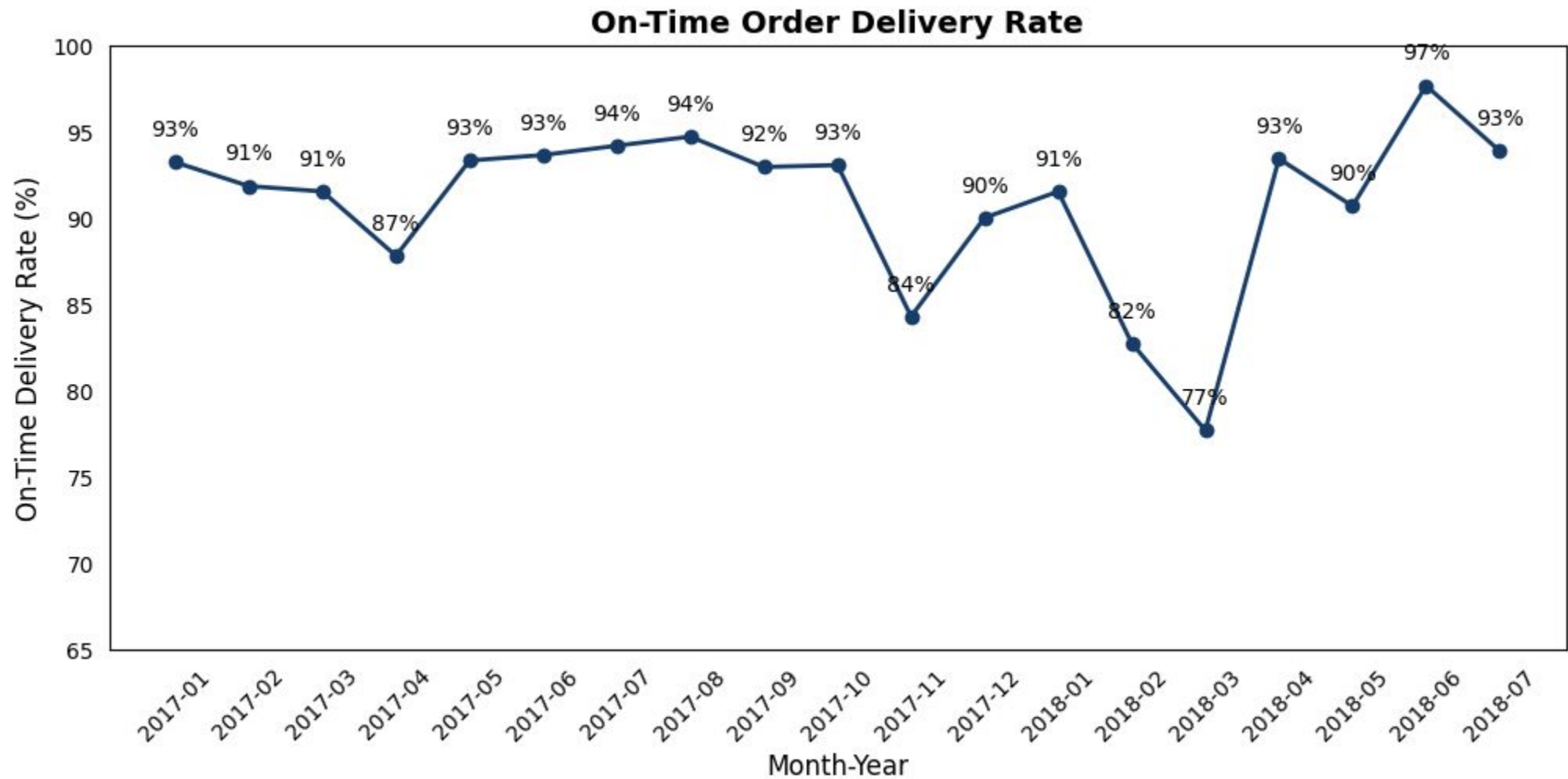
R\$7.39M

total amount sold in 2018
between January and August

+142.15%



“Sales soared by 142%, while freight costs depended on the demand, revealing a pattern of peaks and opportunities for cost optimization!”



Seller takes 2.7 days to reach the carrier

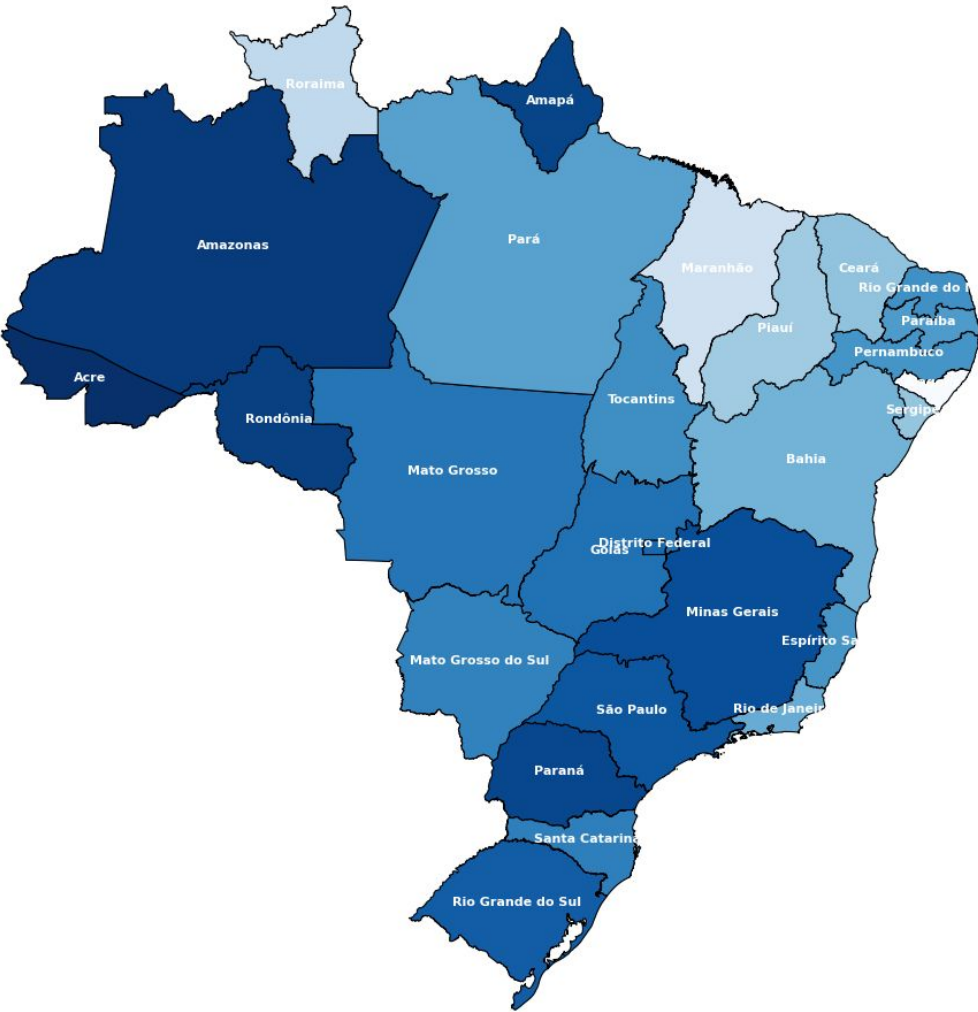
Carrier takes 8.9 days to deliver the product

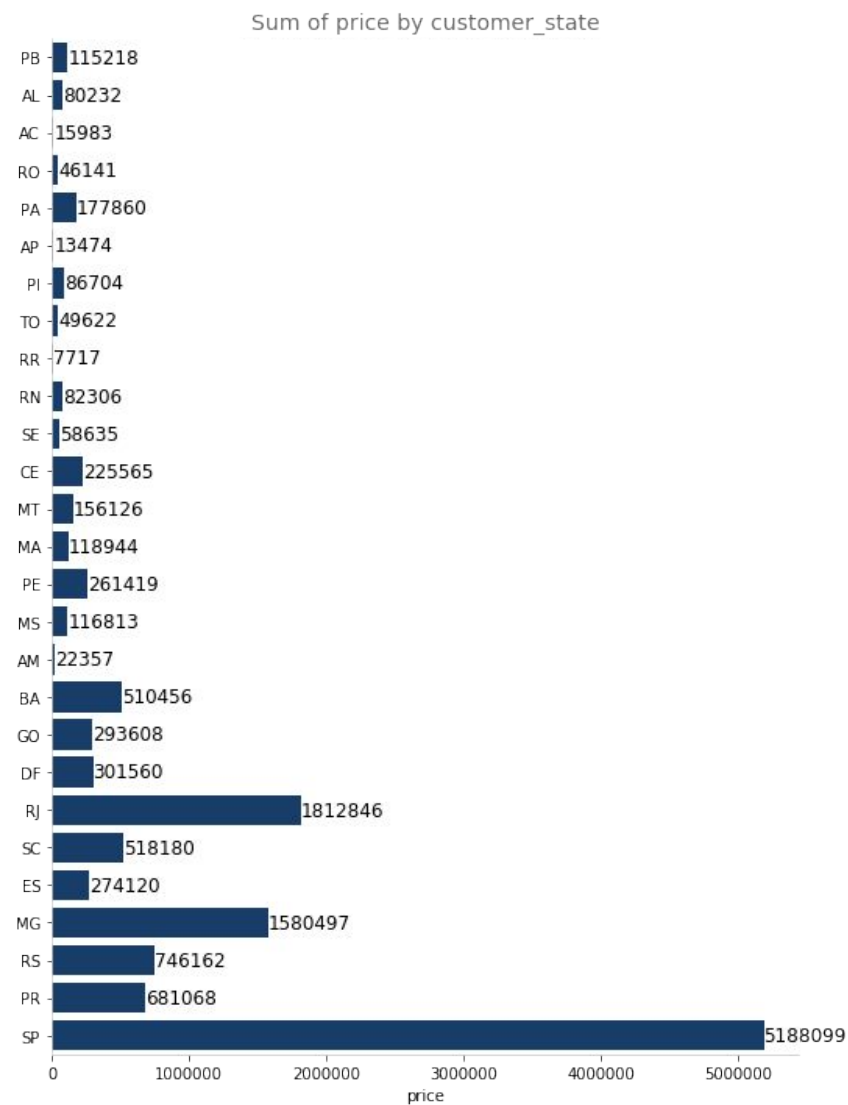
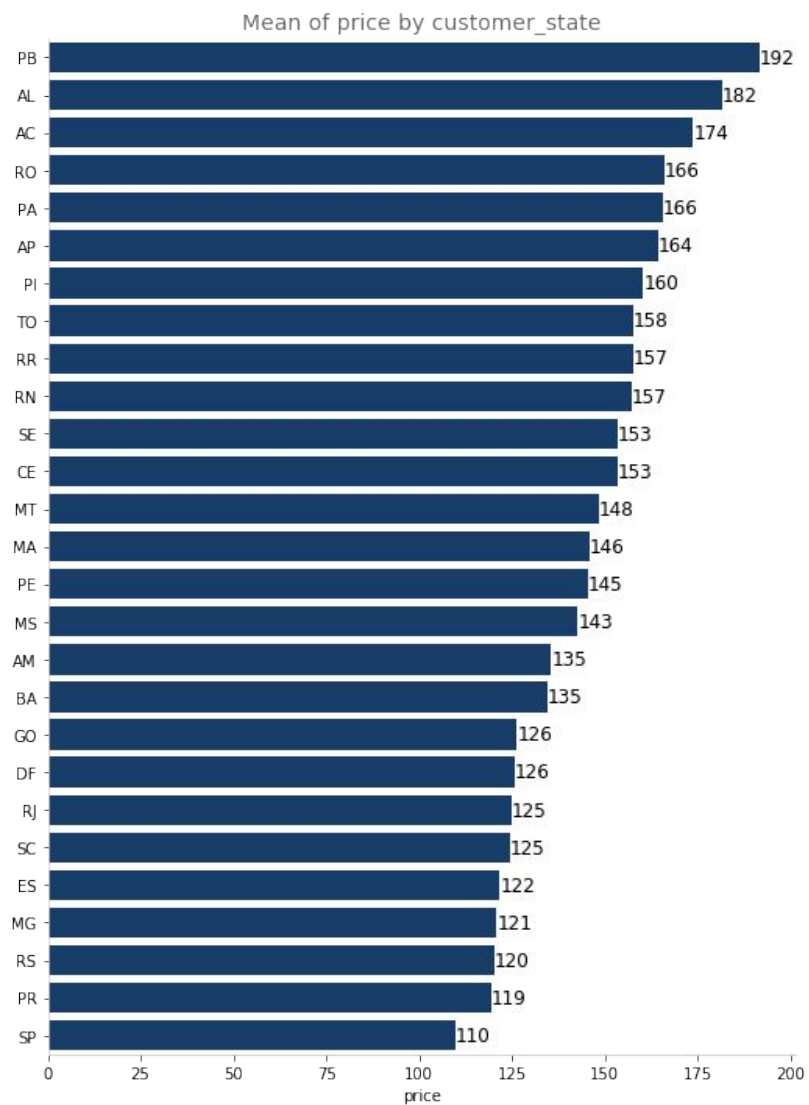
Avg delivery time ~ 12 days

Unique Customers per State in Brazil



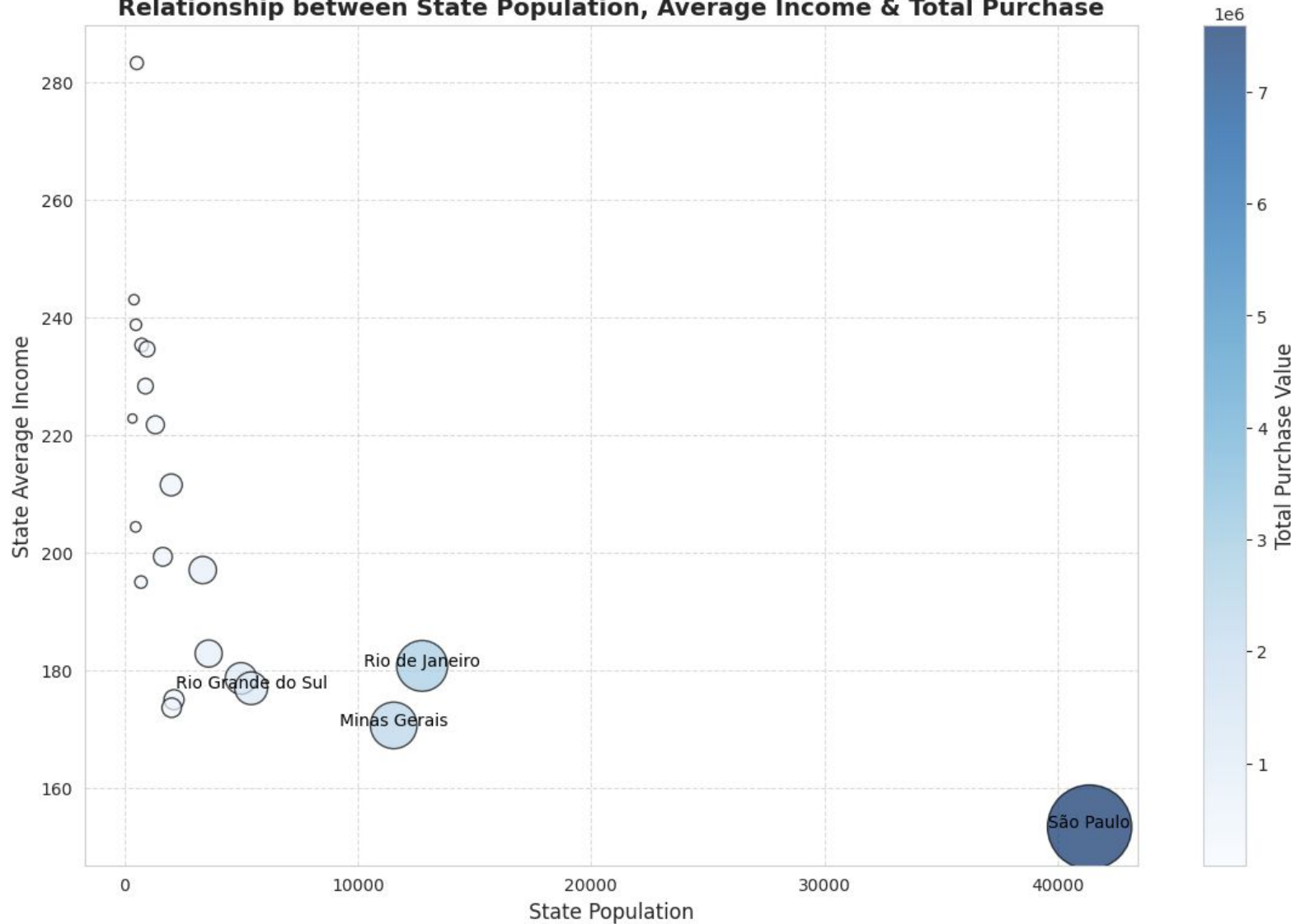
On-Time Delivery Rate by State in Brazil





It's very interesting to see how some states have a high total amount sold and a low price per order. If we look at São Paulo for example, it's possible to see that it is the state with most valuable state for e-commerce (5,188,099 sold) but it is also where customers pay less per order (110.00 per order).

Relationship between State Population, Average Income & Total Purchase



“Higher total purchase value is often driven by larger populations, not necessarily higher average income.”

Approaches

- **Compare and Contrast**

Contrasts weekday vs. weekend orders, year-over-year revenue changes, and customer behaviors.

- **Drill-Down Analysis**

Moves from high-level trends (total sales) to specifics (regional breakdown, product category analysis)

- **Change Over Time**

Show how order volumes and revenue patterns evolve, highlighting seasonal trends like Black Friday

Thank You!