## **Customer Analysis**

### **Analysis Result**

* There are 99,441 total customers.
* Sao Paulo has the highest number of customers with 14,984, followed by Rio de Janeiro with 6,620 customers.
* Other cities with significant customer numbers include Belo Horizonte, Brasilia, Curitiba, Campinas, Porto Alegre, Salvador, Guarulhos, and Sao Bernardo do Campo.
* Most customers fall into the "Non-Profitable" segment, comprising 93,938 customers.
* There are significantly fewer customers in the "Profitable" segment (1,443 customers) and even fewer in the "Very Profitable" segment (38 customers).
* The largest customer segment is "Potential Loyalist" with 17,978 customers, followed by "At Risk" with 16,219 customers.
* The "Potential Loyalist" segment has the highest ratio among customer segments, indicating a higher likelihood of loyalty.
* "Lost customers" have the lowest ratio, suggesting a need for re-engagement efforts.
* Most customers have rated their experiences positively, with a significant number of 5-star ratings (20,554).
* However, there are also substantial numbers of 1-star, 2-star, 3-star, and 4-star ratings, indicating a range of customer experiences.

### **Conclusion**

* The analysis provides insights into the distribution of customers across different segments based on lifetime value, recency, frequency, and monetary value.
* Sao Paulo and Rio de Janeiro stand out as the cities with the highest customer concentrations, suggesting a focus on these areas for marketing and service enhancements.
* While the majority of customers fall into the "Non-Profitable" segment, there is potential to target and nurture customers in the "Profitable" and "Very Profitable" segments to increase overall profitability.
* The distribution of customer ratings indicates varying levels of satisfaction, highlighting the importance of monitoring and addressing customer feedback to improve overall customer experience and satisfaction levels.

## **Order Analysis**

### **Analysis Result**

* Total Orders: 112,650
* Average Order Price: $120.65
* Average Freight Value: $19.99
* Average Delivery Days: 13.2.
* Most orders are placed in the Afternoon, followed closely by Night and Morning. Sunrise has the lowest number of orders.
* The highest number of orders was in 2018, followed by 2017 and 2016.
* The majority of orders are marked as "delivered," accounting for 97.02%.
* A total of 10,792 orders were delivered late, while 88,649 orders were delivered on time.
* The state of Sao Paulo (SP) has the highest number of orders, followed by Rio de Janeiro (RJ) and Minas Gerais (MG).

### **Conclusion**

* Most orders are placed during the Afternoon, suggesting that this time period is popular among customers.
* The highest number of orders was observed in 2018, indicating a potential trend in increasing order volume over time.
* Despite the majority of orders being delivered on time, there is still a notable percentage of late deliveries, which may impact customer satisfaction and retention.
* Sao Paulo emerges as the state with the highest number of orders, emphasizing its significance in the ecommerce market.

## **Sales Analysis**

### **Analysis Result**

* Average sales per Month: $3,977.64
* Month with highest Sales: November 2017
* Month with lowest Sales: December 2016
* Sao Paulo has the highest number of sellers, followed by Curitiba and Rio de Janeiro.
* Other cities with significant seller numbers include Belo Horizonte, Ribeirao Preto, Guarulhos, Ibitinga, Santo Andre, Campinas, and Maringa.
* The majority of payments are made using credit cards, followed by boleto and voucher.
* A small percentage of payments are made using debit cards and a negligible number with an undefined method.
* The highest average freight is for computers, followed by home appliances and agro-industry.
* Categories such as watches and gifts, air conditioning, and fixed telephony have comparatively lower average freight.
* The top-selling categories include bed and bath table, furniture and decor, health and beauty, sports and leisure, and computers and accessories.These categories indicate popular product segments among customers.
* Categories such as music, home comfort, furniture, fashion sports, and flowers have the least number of products sold. These categories may have niche or less popular products compared to the top-selling categories.

### **Conclusion**

* November 2017 emerges as the month with the highest sales, indicating potential seasonal trends or promotional activities during that period.
* Sao Paulo stands out as the city with the highest number of sellers, reflecting its significance as a business hub.
* Payment methods like credit cards and boleto are preferred among customers, suggesting the need to ensure seamless transactions for these methods.
* Categories such as bed and bath table, furniture, and health and beauty are experiencing strong demand. These categories likely have high sales volume, indicating that they are popular among customers. Strong demand suggests that these product categories are meeting customer needs or preferences effectively.
* On the other hand, categories like music and fashion children's clothes have lower sales. Lower sales may indicate lower demand or less popularity among customers. This suggests that these categories may require improvement in product offerings, marketing strategies, or customer engagement to increase sales.

## **Overall Conclusion**

The ecommerce platform exhibits promising potential for growth and optimization across various dimensions. With a substantial customer base of 99,441 individuals, concentrated mainly in urban centres like São Paulo and Rio de Janeiro, there's ample opportunity to deepen customer engagement and loyalty through tailored marketing strategies and personalised experiences. Segmentation by recency, frequency, and monetary value underscores the importance of targeting specific customer segments to maximise value and retention. Meanwhile, the analysis of 112,650 orders reveals operational strengths and areas for improvement, such as optimising delivery logistics to minimise late deliveries and enhancing order fulfilment processes. In terms of sales, average monthly sales of $3,977.64 highlight the platform's revenue potential, with opportunities for expansion into underserved markets and niche product categories. By leveraging data-driven insights and focusing on enhancing customer experience, streamlining operations, and diversifying product offerings, the ecommerce platform can position itself for sustained growth and competitiveness in the market.

### **Possible Recommendations:**

* Business should focus on enhancing customer engagement, loyalty programs, and personalised marketing initiatives to increase customer lifetime value and retention.
* Can streamline order fulfilment processes and logistics to minimise delivery times and reduce the occurrence of late deliveries.
* Possibly explore opportunities to expand market reach beyond major cities and target underserved regions or niche markets.
* Can optimise product offerings based on sales performance, customer feedback, and market demand. Consider diversifying into high-demand product categories to stimulate sales growth.
* Continue offering a variety of payment options to cater to diverse customer preferences and improve the overall shopping experience.
* Leverage data analytics to gain insights into customer behaviour, market trends, and sales patterns, guiding strategic decision-making and business planning.