

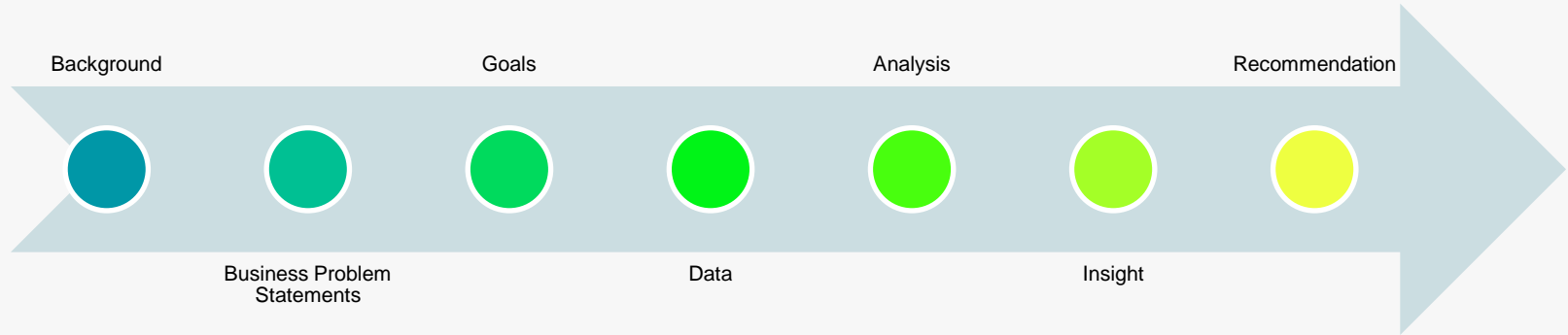
AWS SaaS Sales Data Analysis

Bootcamp Data Analyst with SQL &
Python using Google Platform

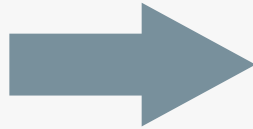
Rahmawati Annisa Salsadilla



Content

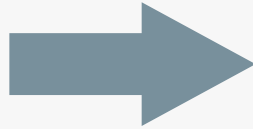


Background



AWS SaaS Factory Program:

AWS Provides the SaaS Factory program to help companies design, build, and optimize SaaS solutions on AWS.



SaaS Services Powered by AWS:

AWS powers many SaaS solutions such as Amazon Chime, Amazon QuickSight, AWS Marketplace.

Business Problem Statements

The AWS (Amazon Web Service) company focusing on SaaS feature is a company that sells sales and marketing software to other companies (B2B). They have collected transactions data from their customer.

1. Analyze the company's sales performance
2. Analyze the company's customer segment
3. Analyze the company's market.

Goals

The main goal is to give insight to AWS (Amazon Web Service) company, which focuses on SaaS features, to understand and optimize their business performance especially if profitability of company are negative because of factors likely based on company's sales performance, customer segment, and company market . By doing those 3 analysis, AWS company can make a good and well-decisions to improve their sales, better serve their customers, and expand their market reach. This will ultimately lead to increased profitability and growth for the company.

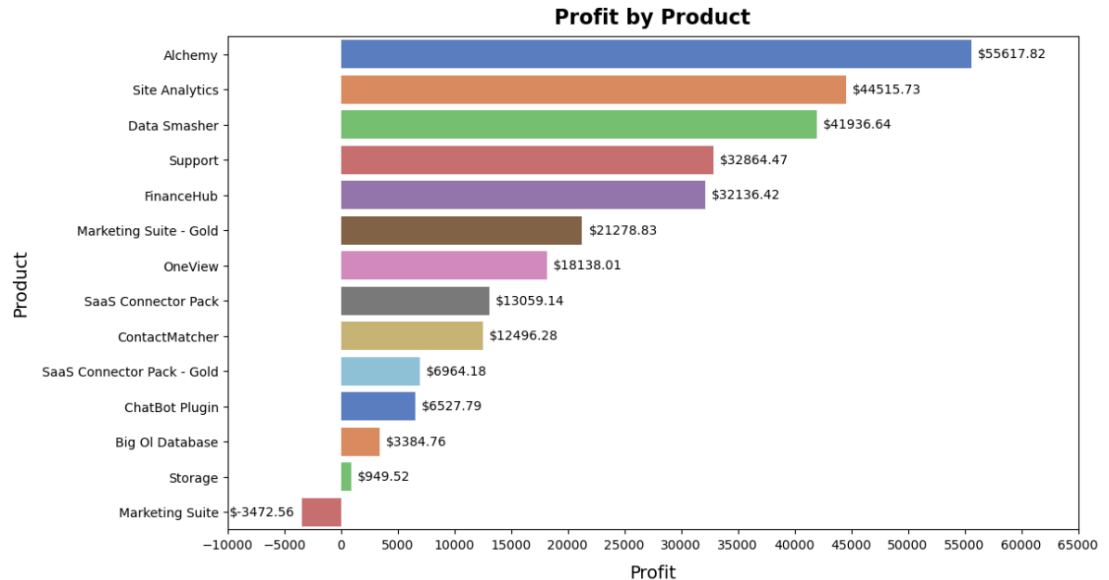
Data

This dataset contains transaction data from SaaS company selling sales and marketing software to other companies (B2B). In the dataset, each row represents a single transaction/order (9,994 transactions), and the columns include:

Unique Code	Date	Region	Customer	Product	Customer Criteria	Sales
<ul style="list-style-type: none">•Row ID•Order ID	<ul style="list-style-type: none">•Order Date•Date Key	<ul style="list-style-type: none">•Country•City•Region•Subregion	<ul style="list-style-type: none">•Contact Name•Customer ID•Customer Name	<ul style="list-style-type: none">•Product Name•License	<ul style="list-style-type: none">•Industry•Segment	<ul style="list-style-type: none">•Sales•Quantity•Discount•Profit

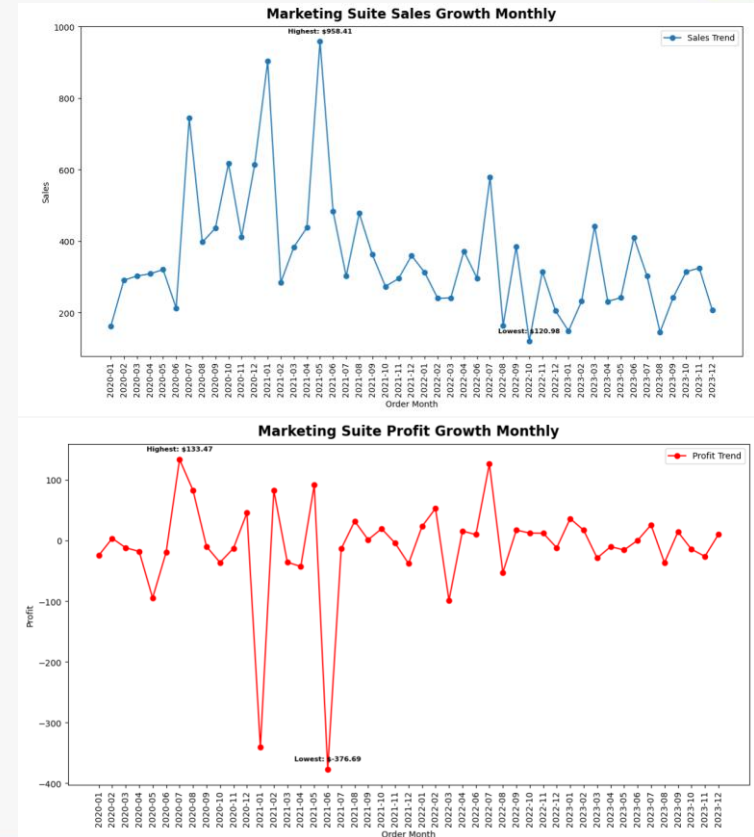
Analysis

Products like Alchemy, Site Analytics, and Data Smasher seem to be the most profitable for AWS SaaS company, generating substantial profits. Meanwhile, The Marketing Suite' product is performing poorly, incurring a negative profit, which might need further investigation into its cost structure or demand.



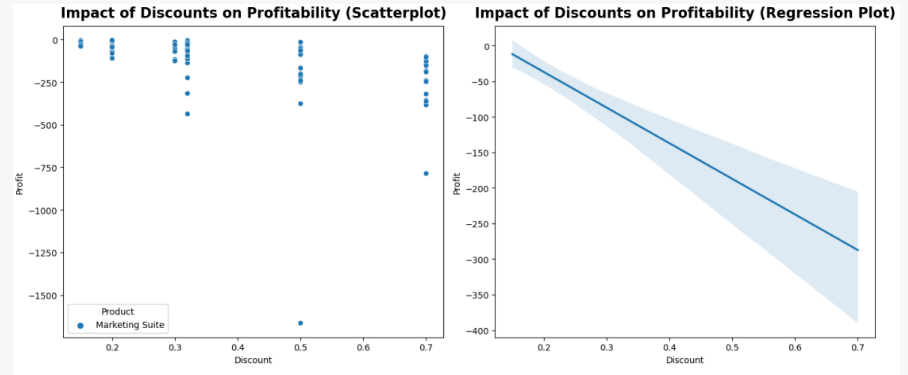
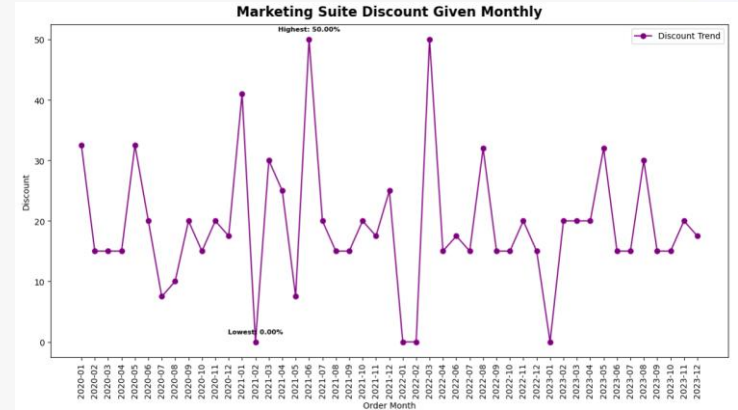
Analysis

- Profit Fluctuation:** The profit figures fluctuate significantly throughout the period from January 2020 to December 2023. This could be due to various factors such as changes in sales, cost of goods sold, operating expenses, or other costs.
- Peak Profit:** The highest profit figure was \$133.47, which occurred in July 2020. This could indicate a successful sales strategy, cost reduction, or a peak shopping season.
- Lowest Profit:** The lowest profit figure was a loss of \$376.69, which occurred in June 2021. This could suggest a slow sales period, increased costs, or a need for improved business strategies during this time.
- Recent Trend:** In the recent months of 2023, profits seem to be relatively stable, with figures mostly ranging from 50-50. However, there is a noticeable dip in August 2023, which might need further investigation



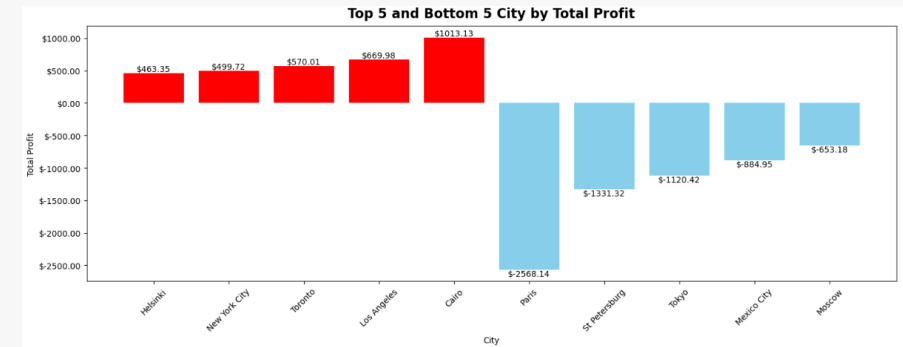
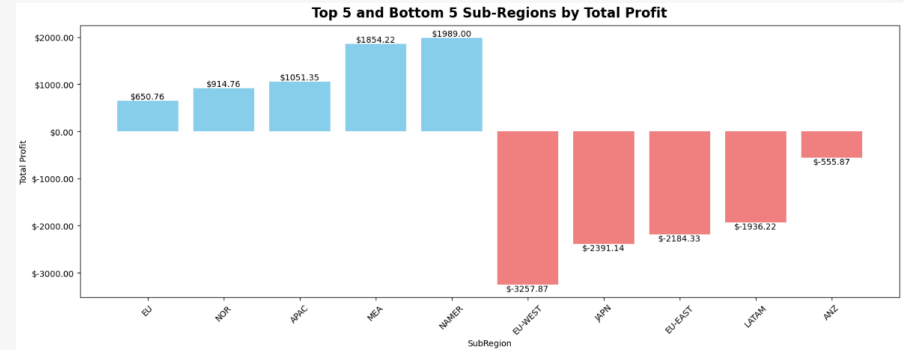
Analysis

- Variation in Discounts: The discounts given vary greatly from month to month, with the highest being 50.00% and the lowest being 0.00%. There is no clear trend in the discount rates; they fluctuate month-to-month.
- Highest Discounts: The highest discounts of 50.00% were given in June 2021 and March 2022.
- No Discounts: There were no discounts (0.00%) given in February 2021, January 2022, and February 2022.
- Negative Correlation: Both plots depict a negative correlation between discounts and profitability for Marketing Suite products. As the discount increases, profitability decreases.
- Scatterplot: The scatterplot on the left shows the profit at various levels of discount for "Marketing Suite" (in blue). Both "Product" and "Marketing Suite" show a decrease in profit as the discount increases.
- Regression Plot: The regression plot on the right shows a clear negative trend line indicating that as the discount increases, the profit decreases. The shaded area represents the confidence interval around the regression line.



Analysis

- AMER is the only region operating at a profit, with a total profit of \$52.78.
 - Both EMEA and APJ are operating at losses, with total losses of -1629.67 and -1895.66 respectively.
 - APJ is the region with the highest loss, followed by EMEA.
 - There is a significant difference between the profit of AMER and the losses of EMEA and APJ.
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- The profitable cities are Helsinki, New York City, Toronto, Los Angeles, and Cairo with profits of 463.35, 499.72, 570.01, 669.98, and \$1013.13 respectively.
 - The unprofitable cities are Paris, St. Petersburg, Tokyo, Mexico City, and Moscow with losses of -2568.14, -1331.32, -1120.42, -884.95, and -\$653.18 respectively.
 - Cairo has the highest profit, while Paris has the highest loss.

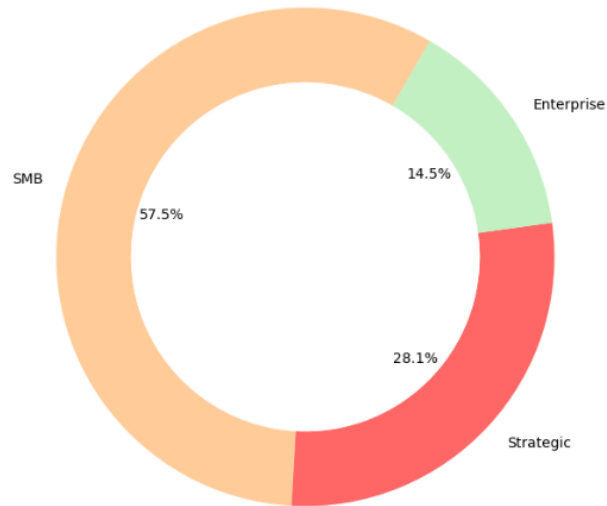


Analysis

- SMB (Small and Medium-sized Businesses): This is the largest segment, making up 57.5% of the total customer base.
- Strategic: This segment accounts for 28.1% of the customers.
- Enterprise: This is the smallest segment, comprising 14.5% of the total customers.

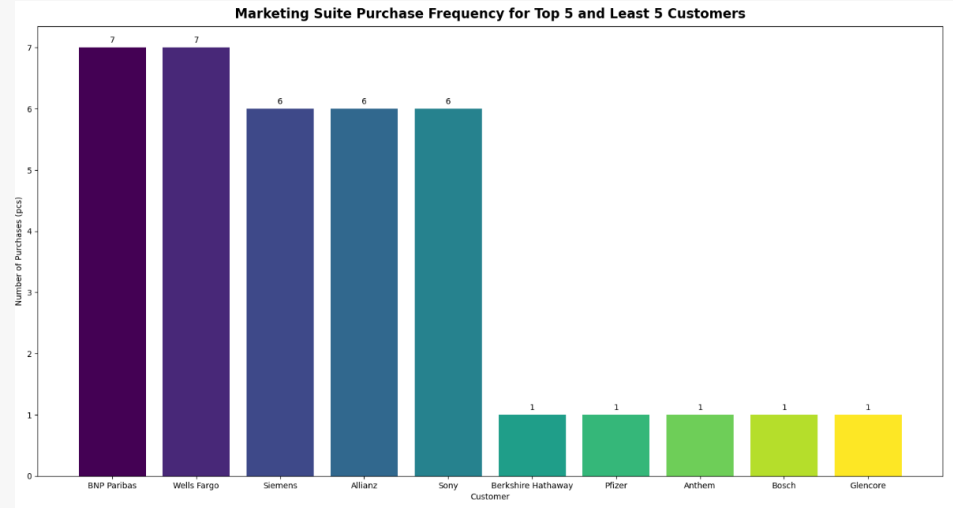
This data could be useful for understanding the company's customer base and making a well-made decision in marketing strategies accordingly. For instance, since SMBs make up the majority of the customer base, marketing efforts could be optimized to cater more to this segment.

Customer Segment Proportions in Marketing Suite



Analysis

- **Customer Purchase Frequency:** BNP Paribas and Wells Fargo are your most frequent customers for the marketing suite product. It might be beneficial to understand why they are making frequent purchases despite the product's negative profit.
- **Low Purchase Frequency:** The customers with low purchase frequency (Berkshire Hathaway Customer, Pfizer, Anthem, Bosch, and Glencore) might need more engagement or targeted marketing to increase their usage of the marketing suite product.
- **Product Profitability:** If the marketing suite product is consistently generating negative profit, it might be worth conducting a thorough cost-benefit analysis. Understanding the product's cost structure and its perceived value to customers could provide insights into whether its pricing strategy needs adjustment



Insight

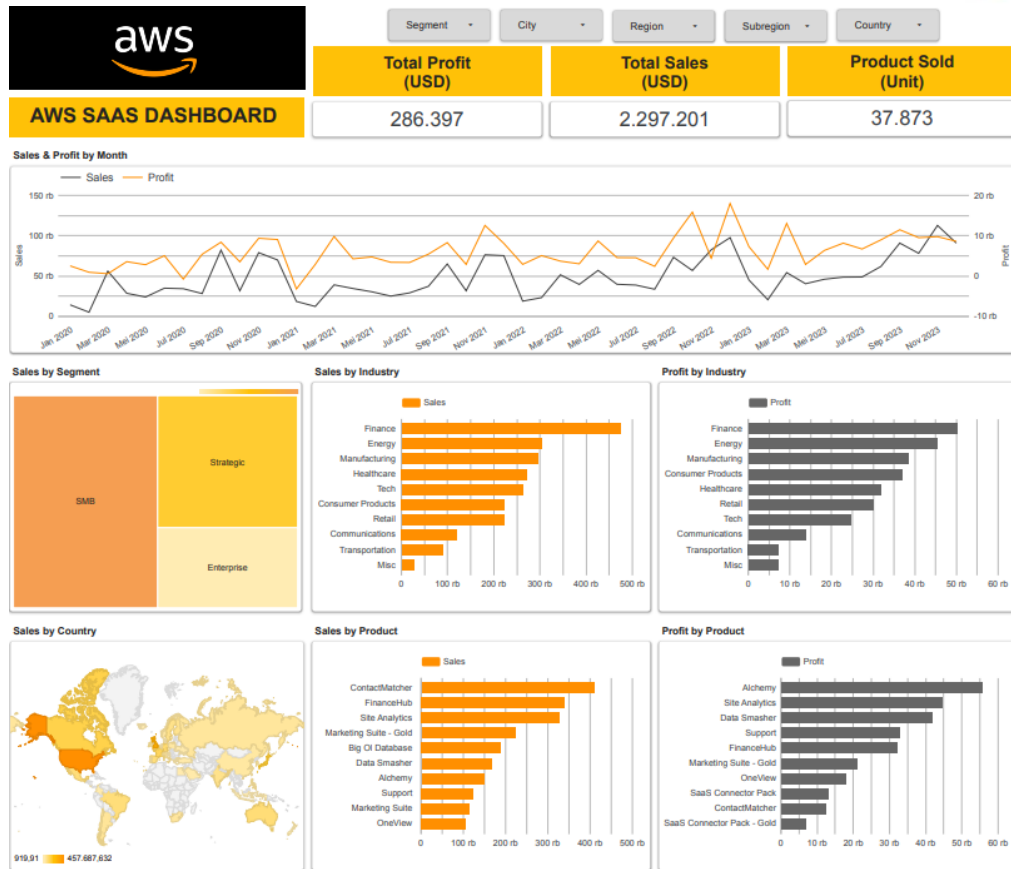
- Discount-Profit Correlation: There's a clear negative correlation between discounts and profitability for the Marketing Suite. Increasing discounts correspond to reduced profitability, implying a need for discount strategy reassessment.
- Regional Analysis: The Marketing Suite performs well in certain regions like AMER but struggles in regions like EMEA and APJ, reflecting the need for tailored strategies in underperforming regions.
- Sub-Regional and Country Trends: Profitability varies across sub-regions and countries. While some areas yield profits, others face significant losses. For instance, while Canada and Egypt show profits, France and Japan depict substantial losses.
- City-level Performance: Certain cities exhibit positive profits for the Marketing Suite, such as Helsinki and New York City, while others like Paris and Tokyo face considerable losses.
- Segment Analysis: The SMB segment represents the largest customer base, suggesting a need to recalibrate marketing strategies to cater more effectively to this segment.

Recommendation

- Strategic Customer Engagement: Focus on understanding the motivations of high-frequency customers like BNP Paribas and Wells Fargo to leverage these insights for better engagement strategies.
- Loss Mitigation Strategies: Further analyze the factors contributing to losses among specific customers to develop targeted strategies for improvement or, if necessary, consider reevaluating the relationship.
- Pricing Strategy and Cost-Benefit Analysis: Conduct a thorough cost-benefit analysis of the Marketing Suite to understand its cost structure and perceived value. This will aid in assessing whether the pricing strategy aligns with customer expectations and market conditions.
- Discount Strategy Optimization: Revisit and optimize the discount strategy to strike a balance between driving sales and preserving profit margins. Consider tiered discounts or conditional offers to maintain profitability.
- Sales-Focused Initiatives: Invest in strategies that boost sales without heavily relying on discounts. These strategies, based on the weak positive relationship between sales and profit/profit margin, can potentially improve profitability without compromising on discounts.

Dashboard

<https://lookerstudio.google.com/reporting/cf269cc4-9f14-413f-96fc-02b14510b9b7>



Do you have any questions?

rahmawati.salsadila@gmail.com
+62 895 1409 8571



[Rahmawati Annisa Salsadila](#)

Thanks!