



▶ **PRODUCT SALES DATA ANALYSIS REPORT**

Pens & Printers

Tien Nguyen Manh – November, 2023

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► INTRODUCTION

01

▶ ABOUT PENS AND PRINTERS

Pens and Printers was founded in 1984 and provides high quality office products to large organizations.

The company is a trusted provider of everything from pens and notebooks to desk chairs and monitors and only sell products made by other companies.



Pens and Printers Company's Logo - Designed by DALL·E

► SALES METHOD FOR NEW PRODUCTS

Three different sales strategies were tested over the past six weeks for a new line of office stationery, so we need to know which approach is the most effective.



Email

Send on first week and another 3 weeks later



Call

Taking 30 minutes to call a customer on average



Email + Call

Send email first week, and calling for 10 minutes a week later

► SALES METHOD FOR NEW PRODUCTS

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Email and Email + Call approaches required lesser work than the Call approach for the sales team

► BUSINESS GOALS



CUSTOMERS

How many customers were there for each approach?



REVENUE SPREAD

What does the spread of the revenue look like overall? And for each method?



REVENUE OVER TIME

Was there any difference in revenue over time for each of the methods?



SALES METHOD

Which method would you recommend we continue to use?



CUSTOMER PROFILE

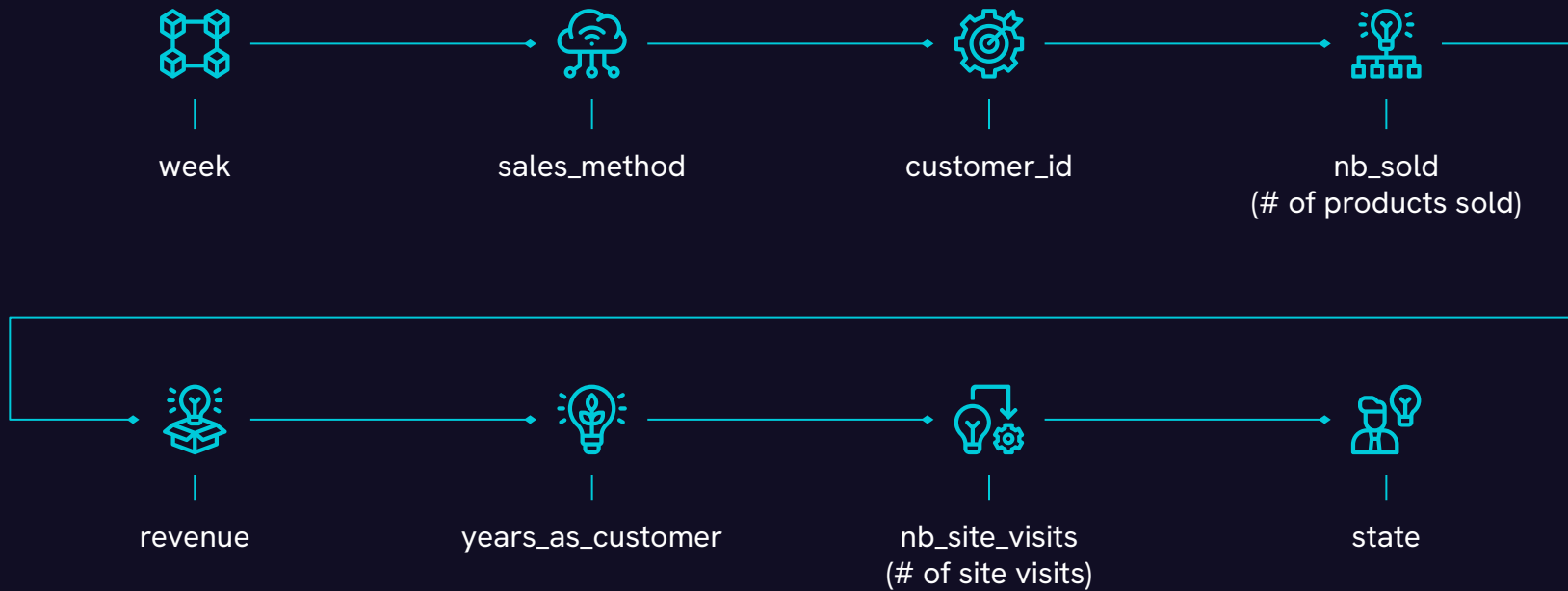
Which are the differences between the customers in each group?



BUSINESS METRICS

Which business metrics should business choose to monitor?

► DATASET



► ONLY THREE VARIABLES NEED CLEANING



SALES_METHOD

Wrong data



REVENUE

Missing values



YEARS_AS_CUSTOMER

Wrong data

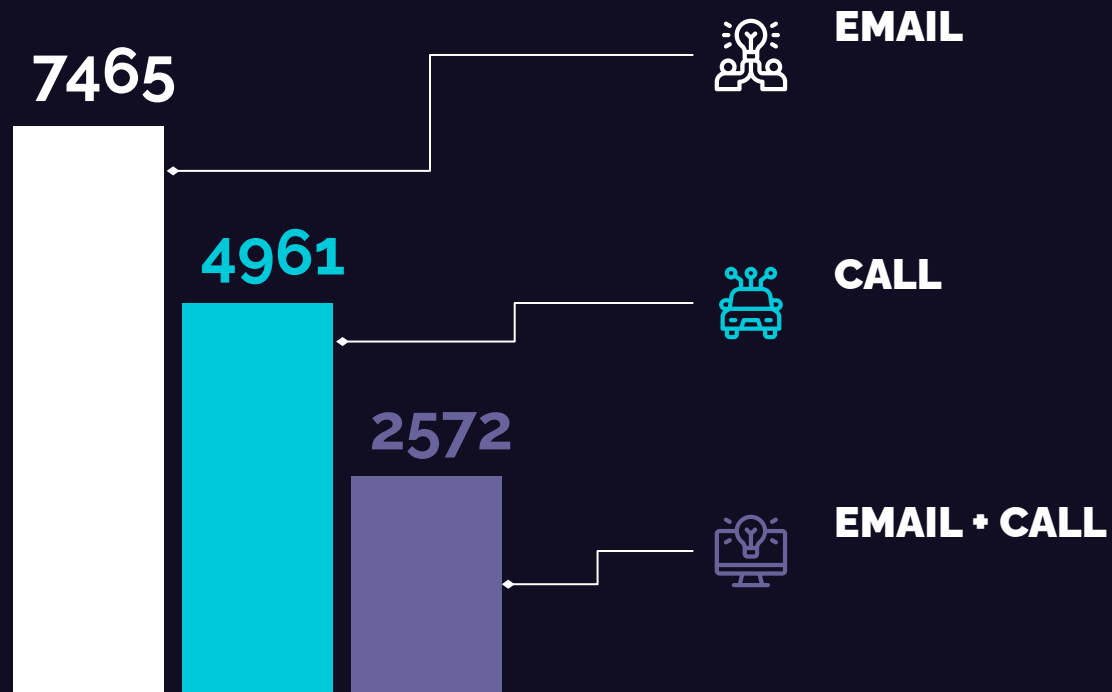
Dataset after cleaning and validating: **14,998 records** and **8 columns**



▶ **EXPLORATORY DATA ANALYSIS**

02

► NUMBER OF CUSTOMERS



► REVENUE BY SALES APPROACH

Total Revenue

	TOTAL	PERCENTAGE
Email	\$720,908	51.34%
Email + Call	\$439,492	31.3%
Call	\$243,712	17.36%

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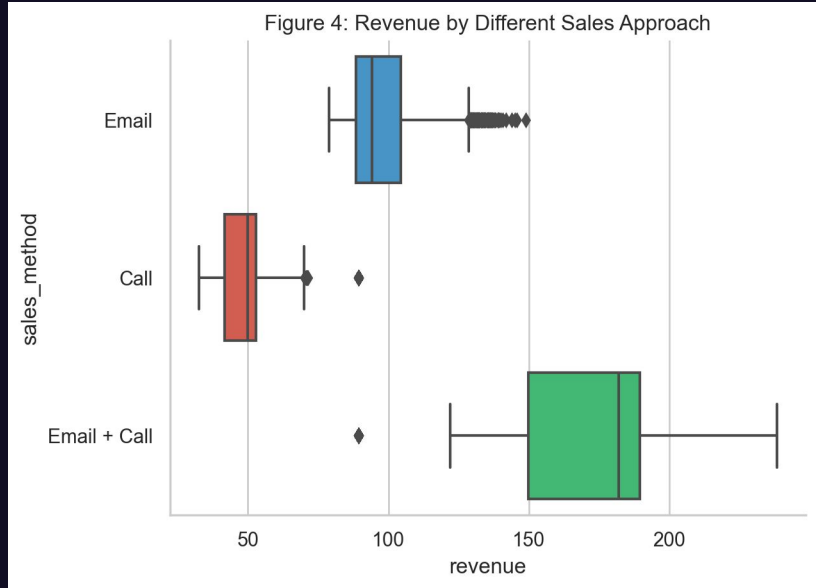
2572

4961

► REVENUE BY SALES APPROACH

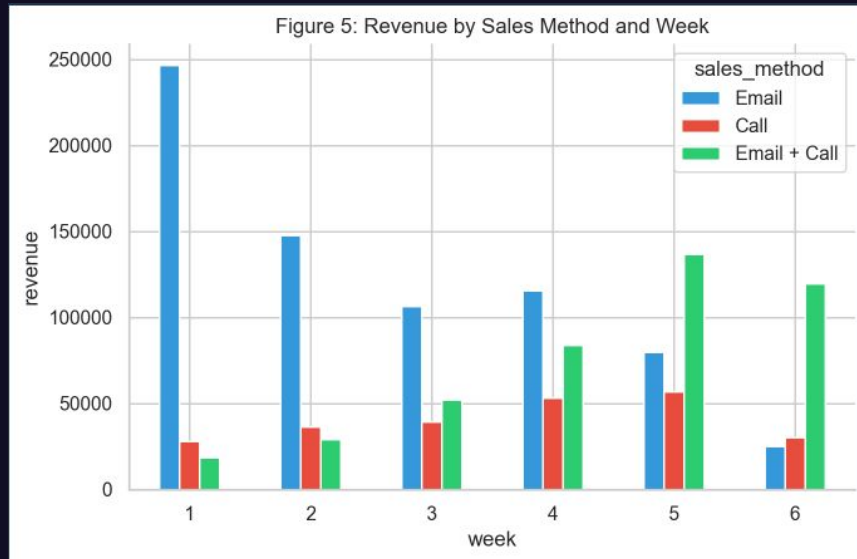
Spread of Value

	MIN	AVG	MAX
Email	\$78.83	\$96.57	\$148.97
Email + Call	\$89.5	\$170.88	\$238.32
Call	\$32.54	\$39.13	\$89.5



► REVENUE OVER TIME

Email group's revenue decreased while the other two increased



Average Weekly Increase in Revenue for Each Approach

Email
+ \$94,845.51

Call
+ \$43,188.47

Email + Call
+ \$84,217.07

► SALES APPROACH TO CONTINUE

"Email + Call" approach stands out as the most effective strategy for the sales team to target:

- Smallest number of customers – 2572
- Total revenue of \$439k, rank no.2
- Highest average revenue per customer: \$170.88/customer
- \$84k revenue increase weekly (just 10k less than "Call")

► CUSTOMER PROFILE BY SALES METHOD

1. New Product Adoption

Figure 9: Distribution of Cumulative Number of New Products Sold By Sales Method

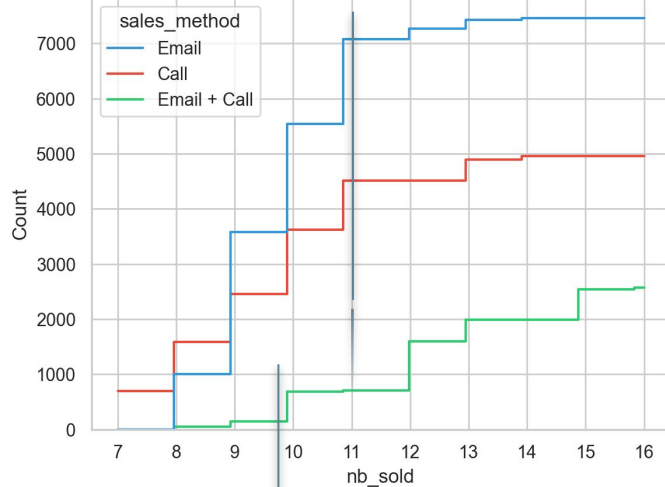
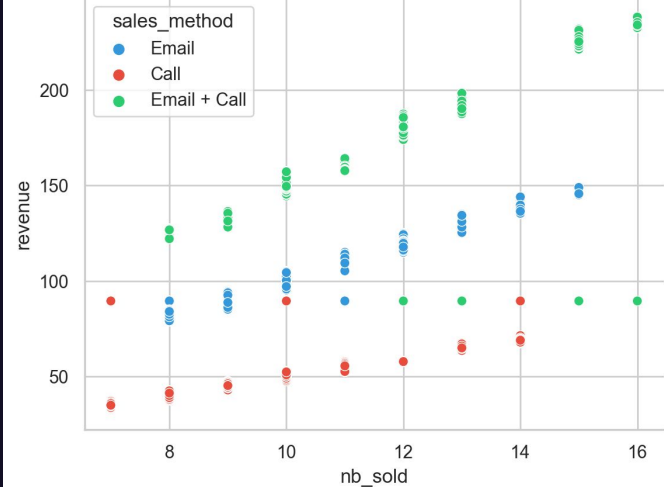


Figure 10: Revenue vs. Number of New Products Sold By Sales Method

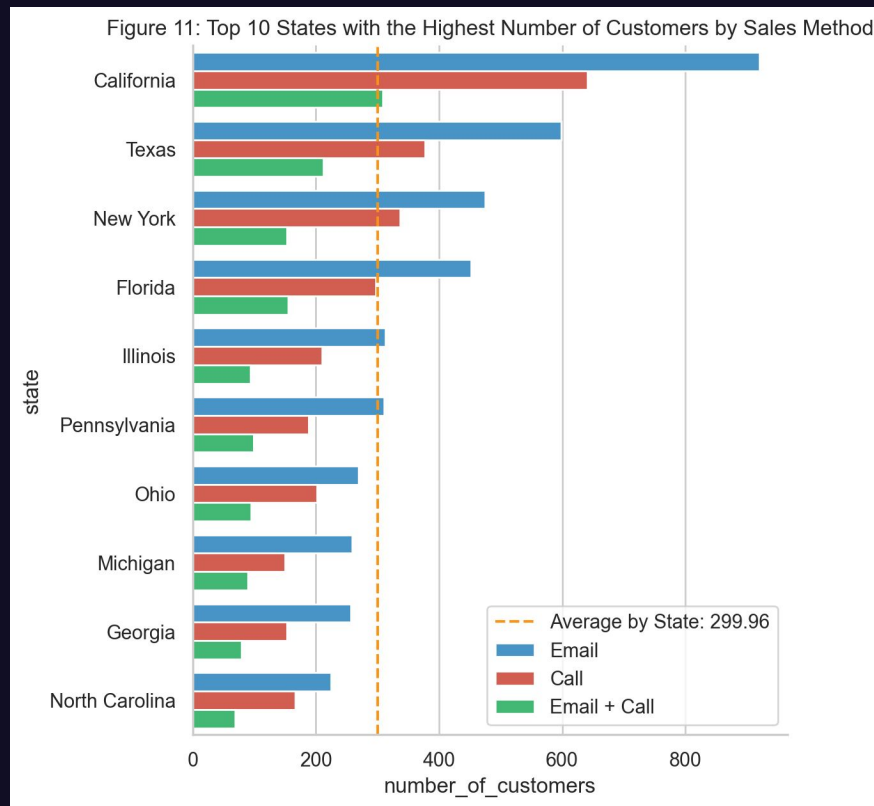


Most of customers in "Email + Call" approach buy more than 10 products to 15 products while most of customers in the other two buy more around 8 to 10 products.

► CUSTOMER PROFILE BY SALES METHOD

2. Demographic Insights

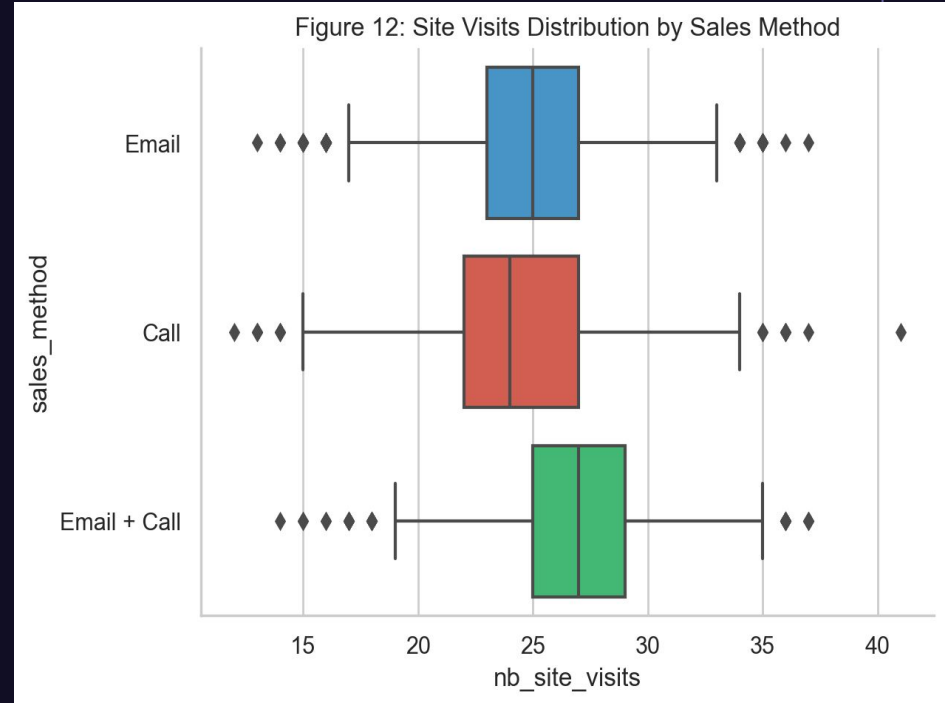
Top 5 states accounts for 37% of total customers



► CUSTOMER PROFILE BY SALES METHOD

3. Website Engagement Over the Last 6 Months

Customers in “Email + Call” visit sites a bit **more often** on average





► BUSINESS METRIC

03

► BUSINESS METRIC

INFO	DESCRIPTION
Metric Name	Average Revenue per Customer by Sales Method
How to calculate	Split total revenue by Sales Method then divide by total of customers in each group
How to use	Use this as baseline to choose the right sales approach, set performance targets, monitor changes in revenue in subsequent weeks or future marketing campaigns.
Initial Value	Email + Call: \$170.88/customer Email: \$96.57/customer Call: \$49.13/customer



► **RECOMMENDATIONS**

04

► FOUR RECOMMENDATIONS



"EMAIL + CALL" TARGET

Consider allocating more resources and focus on the "Email + Call" approach. Imagine revenue we will have if it has the same number of customers in "Email" approach.



MARKETING STRATEGY

Understand the customer profile to create suitable marketing campaigns i.e., with the same number of new products bought, customers in "Email + Call" tend to buy more expensive ones.



GEOGRAPHICAL FOCUS

Focus on the demographic distribution in highly populated and developed states, such as California, Texas, New York, Florida, and Illinois, for more effective targeting.



CONTINUOUS MONITORING

Regularly track and analyze the "Average Revenue per Customer by Sales Method" metric to refine sales strategies and adapt to changing customer behaviors.



► **THANKS!**