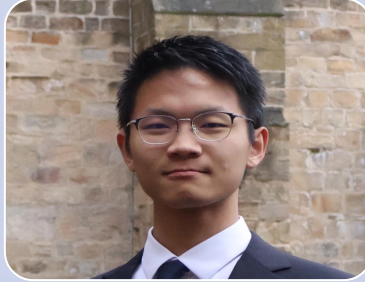




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A hand in a blue shirt points at a tablet. The tablet screen shows a bar chart with seven wireframe bars of varying heights. The background is a blurred blue fabric.

# Data Understanding

BANKBYTES

# Pillars of the data

- The Bank dataset columns were divided into four main pillars .
- These pillars made it easier to understand factors that might greatly influence the outcome of the marketing campaign.
- The pillars are:
  - ❑ Personal Information
  - ❑ Contact Information
  - ❑ Campaign Information
  - ❑ Economic Indicators





# 1. Personal Information

- These attributes provide demographic and financial details about the clients which are essential for understanding their profiles and predicting their profiles.
- a. Age: Different age groups show varying levels of interest in the product.
- b. Job: The type of job indicates client's financial stability thus influencing their decision.
- c. Marital status: This affects financial responsibilities and priorities.
- d. Education: Level of education often correlates with income and financial literacy.
- e. Loan: Personal loans reflect financial behavior and risk.
- f. Default: This attribute shows if a client has credit. This illustrates creditworthiness and financial reliability.
- g. Housing: This attribute shows if a client has housing loan which indicates financial commitments and ability to invest.





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## 2. Contact Information

- This characteristics provide details about the method and timing of the last contact with the client, which can influence the client's response.
- a) Contact: This describes means of communication, which their effectiveness greatly vary.
- b) Month: The time of the year can affect client responses due to seasonal factors and financial cycles.
- c) Day of the week: client availability and mood might differ on different days of the week.
- d) Duration: This is duration of call in seconds. Longer call might indicate more interest from the client, but this is known only after the call.



# 3. Campaign Information

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- These attributes track the number of contacts made and the outcomes of previous interactions, providing insights into the client's engagements history.
- a) Campaign: Number of contacts during this campaign. Frequent contacts might indicate persistence but could also lead to fatigue.
- b) Pdays: Days since the client was last contacted (999 means not contacted before).
- c) Previous: This column shows number of contacts before this campaign. Past engagement level could affect the current campaign's success.
- d) Poutcome: Outcome of the previous campaign. Previous campaign success can be a strong predictor of the current campaign success.

# 4. Economic Indicators

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- These attributes provide contextual economic data which can affect the overall success of the marketing campaign.

- a) Emp.var.rate: This column shows employment variation rate (quarterly indicator). This reflects economic stability and job market conditions.
- b) Cons.price.idx: Consumer price index (monthly indicator). This illustrates inflation and cost of living, affecting disposable income.
- c) Cons.conf.idx: Consumer confidence index is really important as it reflects consumer optimism or pessimism about the economy, influencing spending behavior.
- d) Euribor3m: This column provides information on Euribor 3-month rate (daily indicator). This affects loan interest rates, influencing financial decisions.
- e) Nr.employed: Number of employees (quarterly indicator). This reflects labour market size and the economic health.

Lastly, we had  $\gamma$ - (output variable) indicator which show if the client had subscribed to the term deposit.

