

## Task - 5

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### Detailed Column Descriptions

#### **Bank client data:**

- 1 - age (numeric)
- 2 - job : type of job (categorical: "admin.", "unknown", "unemployed", "management", "housemaid", "entrepreneur", "student", "blue-collar", "self-employed", "retired", "technician", "services")
- 3 - marital : marital status (categorical: "married", "divorced", "single"; note: "divorced" means divorced or widowed)
- 4 - education (categorical: "unknown", "secondary", "primary", "tertiary")
- 5 - default: has credit in default? (binary: "yes", "no")
- 6 - balance: average yearly balance, in euros (numeric)
- 7 - housing: has housing loan? (binary: "yes", "no")
- 8 - loan: has personal loan? (binary: "yes", "no")
- # related with the last contact of the current campaign:
- 9 - contact: contact communication type (categorical: "unknown", "telephone", "cellular")
- 10 - day: last contact day of the month (numeric)
- 11 - month: last contact month of year (categorical: "jan", "feb", "mar", ..., "nov", "dec")
- 12 - duration: last contact duration, in seconds (numeric)
- # other attributes:
- 13 - campaign: number of contacts performed during this campaign and for this client (numeric, includes last contact)
- 14 - pdays: number of days that passed by after the client was last contacted from a previous campaign (numeric, -1 means client was not previously contacted)
- 15 - previous: number of contacts performed before this campaign and for this client (numeric)
- 16 - poutcome: outcome of the previous marketing campaign (categorical: "unknown", "other", "failure", "success")

**Output variable (desired target):**

- 17 - y - has the client subscribed a term deposit? (binary: "yes", "no")

## **Questions**

- 1. Age Distribution: What is the age distribution of the bank clients?**
- 2. Job Distribution: What are the proportions of clients in different job categories?**
- 3. Marital Status Distribution: How is the marital status of clients distributed?**
- 4. Education Level Distribution: What are the proportions of clients with different education levels?**
- 5. Default Status Distribution: What percentage of clients have credit in default?**
- 6. Average Balance by Job: What is the average yearly balance of clients in each job category?**
- 7. Housing Loan Status: How many clients have housing loans versus those who do not?**
- 8. Personal Loan Status: How many clients have personal loans versus those who do not?**
- 9. Contact Method Distribution: What are the proportions of different contact communication types used?**

**10. Subscription Rate by Previous Outcome: What is the rate of term deposit subscriptions based on the outcome of the previous marketing campaign?**

**Thank you**