

## Week 9

Data Science Intern at Data Glacier  
Project: Bank Marketing (Campaign)

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### 1. Problem Description

ABC Bank wants to sell its term deposit product to customers and before launching the product they want to develop a model which help them in understanding whether a particular customer will buy their product or not (based on customer's past interaction with bank or other Financial Institution).

### 2. Github Repolink: [https://github.com/agbaysa/dataglacier\\_week9](https://github.com/agbaysa/dataglacier_week9)

### 3. Data Transformation

The following data transformation was done on the data:

- a. Drop the 'duration' column as required.
- b. Dropping of duplicate rows
- c. Profiling of the dataset using pandas-profiling to highlight the following:
  - i. Number of Variables
  - ii. Number of observations
  - iii. Missing Data
  - iv. Duplicate Rows
  - v. Data size
  - vi. Data Types
  - vii. Distribution of Continuous Features
  - viii. Cardinality of Categorical Features
  - ix. Correlations of Continuous Features
- d. Nominal labelling of the following columns:
  - i. job: nominal labelling and grouping of categories to address high cardinality
  - ii. marital: nominal labelling
  - iii. education: nominal labelling
  - iv. default: nominal labelling
  - v. housing: nominal labelling
  - vi. contact: nominal labelling
  - vii. campaign: nominal labelling and grouping of categories to address high cardinality
  - viii. poutcome: nominal labelling
  - ix. y: nominal labelling
  - x. pdays: binning of past due days by bucket (e.g. 1, 30, 60 days, etc.) in order to reduce cardinality and for EDA purposes