**CAPSTONE PROJECT ONE: PREDICT EFFECTIVENESS OF MARKETING CAMPAIGN**

**Project Summary**

**Objective**

The objective of this capstone project is to predict which customers of the banking institution will subscribe to a term deposit (variable y). The client in question, a Portuguese Banking Institution seeks to maximize the effectiveness of its marketing campaign (phone calls) with regards to term deposit product (variable y). Data was gathered from the direct marketing campaign activities of a Portuguese banking institution, through phone calls to customers.

**Problem statement:**

An initial analysis shows that the marketing campaign had only an 11.27% success rate of customers that subscribed to Term deposit. Banking client seeks to predict which customers are most likely to subscribe to term deposit, thereby maximizing the percentage of customers that subscribe to term deposit ‘y’.

Predicting customers most likely to subscribe to Term deposit, will ensure a very cost-effective marketing program and maximized profitability of marketing efforts. Based on the results of findings, the client will be empowered to carry out targeted marketing campaigns for product ‘y’, by ensuring that marketing efforts are directed at customers who are most likely to subscribe to the term deposit. This could potentially have a high impact on the client’s bottom line, by reducing costs, through targeted customer marketing and streamlined processes.

**Hypothesis**

**Project Methodology**

The following steps were followed in executing this project:

* Problem definition and Hypothesis Formulation
* Data Wrangling
* Data Exploration and Visualization
* Identification and selection of explanatory variables using correlation
* Model and Test Data
* Communicate and Visualize Major insights and findings

**Data Wrangling**

The Dataset contains, 1 dependent variable ‘y’ and 20 independent variables with a total of 41,188 rows.

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