# Customer\_Conversion\_Prediction

## Project Overview:

- This Customer Conversion Prediction Problem is a Final Data Science Project task for the GUVI Geek Networks, IITM Research Park

- This is a Classification Machine Learning Problem

- Fit the best ML model for the given dataset

## Problem Statement:

1. You are working for a new-age insurance company and employ multiple outreach plans to sell term insurance to your customers.

2. Telephonic marketing campaigns still remain one of the most effective ways to reach out to people however they incur a lot of cost.

3. Hence, it is important to identify the customers that are most likely to convert beforehand so that they can be specifically targeted via call.

4. We are given the historical marketing data of the insurance company and are required to build a ML model that will predict if a client will subscribe to the insurance.

## Features:

### Input Variables:

- age (numeric)

- job : type of job

- marital : marital status

- educational\_qual : education status

- call\_type : contact communication type

- day: last contact day of the month (numeric)

- mon: last contact month of year

- dur: last contact duration, in seconds (numeric)

- num\_calls: number of contacts performed during this campaign and for this client

- prev\_outcome: outcome of the previous marketing campaign (categorical: "unknown","other","failure","success")

### Output variable (target):

- y --> has the client selected to the insurance? (YES/NO)

## Tools and Technologies Covered:

- Python

- Google Colab

- Machine Learning

- Numpy

- Pandas

- Matplotlib

- Seaborn

## Methods:

- Importing Required Files

- Data Cleaning

- Exploratory Data Analysis

- Data pre-processing

- Balancing of Data

- Data Scaling

- Modeling

## Machine Learning Algorithms:

- Logistic Regression

- KNN Classifier

- Decision Tree

- Random Forest

- XG Boost

\*\*\*AUROC(roc\_auc) evaluation metrics used for calculating to fit the model\*\*\*