Group Name: Glacier Analysis Group

Team Members Details:

Name, Email, Country, College/Company, Specialization (Data Science, NLP, Data Analyst)

1. Tarusmita Boro, tarusmita.boro@gmail.com, United Kingdom, Data Science
2. Jonas Lütticken, jonaslutticken@gmail.com, Germany, Data Science
3. Noella Mutuku, noellamutuku@gmail.com, Kenya, Data Glacier, Data Science
4. Jeffrey Joseph, jeffreyjoseph21506@gmail.com, United Kingdom, Data Science

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 helps 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.

Business Understanding:

The bank aims to use a machine learning model to identify potential customers with a higher likelihood of purchasing their product. By doing so, they can streamline their marketing efforts, focusing specifically on those individuals with greater buying potential. This targeted approach not only conserves resources but also optimizes the efficiency of their marketing channels, such as telemarketing and SMS/email campaigns. Ultimately, this strategy minimizes costs associated with resource allocation and billing, maximizing the bank's return on investment.
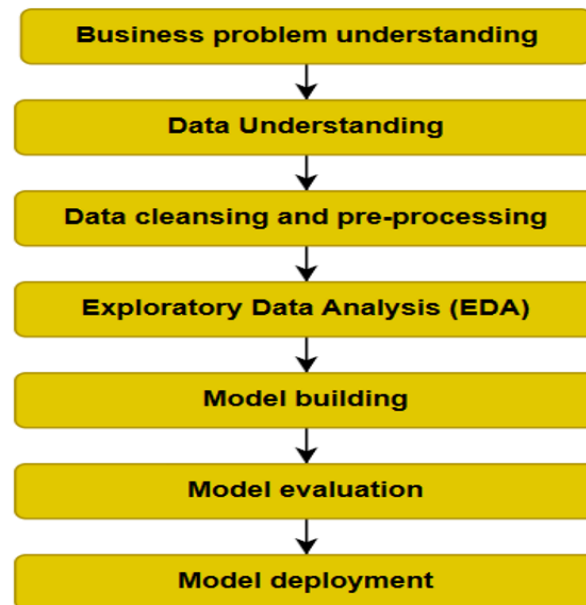
Project Life Cycle:

Figure 1: Shows high level design of project life cycle.

Deliverables	12-Apr-24	19-Apr-24	26-Apr-24	2-May-24	9-May-24	16-May-24	23-May-24	29-May-24
1. Business Problem Understanding	■							
1.1. Problem identification and scope of the project. 1.2. Github repo creation 1.3. Project planning	■							
2. Understanding Data		■						
2.1. Understanding type of data, problems in data 2.2. Approaches to overcome the problem in data		■						
3. Data Cleansing and Transformation			■					
3.1. Data cleaning or pre-processing 3.2. Peer review of the approaches used			■					
4. Exploratory Data Analysis (EDA)				■				
5. EDA presentation and Proposed Modeling Technique				■				
5.1. EDA presentation for business users 5.2. Propose model to the tech team for this dataset					■			
6. Model selection and model building						■		
6.1. Model evaluation						■		
7. Final project and report submission due								■
7.1. Report creation and submission 7.2. Code submission on Github								■

Figure 2: Depicts the GANTT chart. This contains a brief summary of deliverables along with the deadlines or planned completion dates. We will now briefly discuss each of our planned deliverables as mentioned on the GANTT chart.

Business Problem Identification:

The primary goal of this phase is to identify the business problem and also the scope of the project.

As the first step towards achieving the first set of deliverables,, we have built the team and have created a Github repository.

Data understanding:

In this stage, we will try to identify the data required for the project. Once we have collected the data, we will study the data, if they have any problems, such as NA values, outliers, etc. Furthermore, we will try to find approaches on how to handle such problems with the data.

Data cleaning and transformation:

We will try different techniques to clean the data. Each member of the team would try some different approaches and would peer review to find out the best possible techniques.

Exploratory Data Analysis (EDA):

We will perform various exploratory data analysis on the data and evaluate some hypothesis tests. We will test our assumptions on the data.

Model selection and model building dashboard:

This is our model evaluation phase. We will select our base model and explore various other models and evaluate the model, if it fits the business requirement.

Final code submission and model deployment:

After we have evaluated our model on various test cases, we will prepare the final code and documentation. We will then deploy the final code and documentation involved on our Github repository.

Data Intake Report:

📄 Data Intake Report

GitHub Repo Link:

https://github.com/TaruIndia/predict-termdepositsubscription