

# BFCAI Summer Training – Machine Learning

## Final Project Description

Group 4

You are required to implement your own final project as *individual*, you have some requirements to do in criteria of **100 points**:

- **Implementation – (50 Points)**
  - Perform Exploratory Data Analysis with Visualization (10 points)
  - Clean your data as much as possible including removing outliers if exist (5 points)
  - Encode any categorical attribute in your dataset if exist (5 points)
  - Standardize your attributes if possible (10 points)
  - Use **Decision Tree Classifier** to classify your records (10 points)
  - Tune your hyperparameters using GridSearchCV to give better performance (5 points)
  - Visualize your model performance (train against validation) including ROC-AUC curve and training performance and confusion matrix (5 points)
- **Evaluation – (10 Points)**
  - Your model Performance will be evaluated using Recall metric against hidden test set.
  - You should achieve at least **85%** of the specified metric.
- **Presentation – (20 Points)**
  - Submit your notebook as part of the presentation (5 points)
  - Create your own PowerPoint presentation at maximum *10 Slides* showing your proposed work (5 points)
  - Discuss your project in maximum of *5 Minutes* in front of your mates (10 points)
- **Communication – (20 Points)**
  - Record a video about 2 minutes showing your notebook and the proposed work (5 points)
  - Post your video with description on your **LINKED IN** profile and add a mention to the trainer **@Yousef Elbaroudy** and add hashtag of **#BFCAI** and **#MachineLearning** (5 points)
  - Upload your notebook on your Kaggle account and make it public (5 points)
  - Upload your proposed work on your account through Github platform (5 points)

**Trainer:** Yousef Elbaroudy