# 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 *Random Forest* 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 *Precision* metric **against hidden test set.**
  - You should achieve at least **92%** 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