

# **Machine Learning Assignment 1**

**Submission Deadline: 18<sup>th</sup> May 2023**

**Each team has to execute the codes and for submission, give a printout of the code with results and analysis part well documented.**

**Also note that final marking for this assignment will be based on Viva for the submitted work.**

For the chosen dataset:

- 1) Describe the dataset
- 2) Do a correlation analysis
- 3) Perform Data Cleaning
- 4) Perform Feature Scaling
- 5) Select 2 models and perform training and evaluation on the dataset
- 6) Show how Cross validation results in better evaluation
- 7) Fine Tune the models using Grid Search and Random Search and find the best parameters
- 8) Take a classifier model and do the following:
  - i) Confusion Matrix
  - ii) Precision
  - iii) Recall
  - iv) Accuracy
  - v) Precision Vs Recall Plot
  - vi) ROC curve plot and AUC