DA 312, Advanced Machine Learning Laboratory
Lab 1

Instructor:	Dr. Chiranjib Sur	**Time:**	Wednesday - 9:00-11:00 (MDSAI Lab)
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Problem 1: [30 marks]

Consider the Iris dataset below:

```
from sklearn.datasets import load_iris
# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['target'] = iris.target
```

1. Use Random Forest

2. Use SVM

3. Use Classification Tree

4. Use Logistic Regression

5. Use LDA

6. Use QDA

7. Use kNN

8. Use Naïve Bayesian

Problem 2: [60 marks]

Now using the dataset below, use the above procedures to classify. Show results for 70-30 split and 10 fold cross validation.

https://www.kaggle.com/datasets/ayushtankha/70k-job-applicants-data-human-resource/data

Problem 3: [10 marks]

Try to see if there are GPUs in the system.

```
import torch
torch.cuda.is_available()
torch.cuda.device_count()
torch.cuda.current_device()
torch.cuda.device(0)
torch.cuda.get_device_name(0)

import tensorflow as tf
tf.test.is_gpu_available()
tf.test.is_built_with_cuda()
```