ASSIGNMENT -2

Individual Assignment (100 points)

Instructions:

- Submit the paper review as a word or pdf file.
- Submit code as a Python notebook (.ipynb) file along with the HTML version.
- Write elegant code with substantial comments. If you have reused code from a website add the links as reference.

1. Paper Review – Select and review a technical paper from the list of papers (40)

2. Build a small neural network using Tensorflow **without** using the Keras API. (20)

   - Train the model on an artificially generated dataset of your choice.

   - You may use TF API functions such as GradientTape or SGD optimizer for backpropagation.

3. Build a Deep Learning model using Keras to classify the IRIS flowers dataset. (20)

   - Summarize the model architecture

   - Explain the hyperparameters used and the reason why they were used.

   - Compare model performance metrics (Accuracy, F1 Score, Confusion Matrix, etc.), with at least two ML models built using sklearn.

4. Build a Deep Learning model using Keras to learn the Sine function. (20)

   - Summarize the model architecture

   - Explain the hyperparameters used and the reason why they were used.

   - Plot the learned mapping for a given range ($-\pi$, π) and compare it with the Sine wave.