**Neural Networks & Deep Learning**

Student Id: - 700746579

Student name: - Naredla Bhanu Teja

GitHub Link: - https://github.com/BhanuTeja65790/Neural\_Networks\_Assignment-8

Lesson Overview:

In this lesson, we are going to discuss types and applications of Autoencoder.

Programming elements:

1. Basics of Autoencoders
2. Role of Autoencoders in unsupervised learning
3. Types of Autoencoders
4. Use case: Simple autoencoder-Reconstructing the existing image, which will contain most important features of the image.
5. Stacked Autoencoder

In Class Programming:

* Add one more hidden layer to autoencoder.
* Do the prediction on the test data and then visualize one of the reconstructed version of that test data. Also, visualize the same test data before reconstruction using **Matplotlib.**
* Repeat the question 2 on the denoisening autoencoder.
* plot loss and accuracy using the history object.

**Solution:**

* These are the output screenshots of the following code:































