**CS5720**

**Neural Networks & Deep Learning - ICP-8**

**Name: Pasumarthi Shanmukha Laxmi**

**#700: 700756736**

**Username: SXP67360**

**Github Link**: <https://github.com/csk17/NNDL_ICP9>

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. Use case: 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 ouput screenshots of the following code:



