**NN&DeepLearning\_Assignment\_8: Autoencoders**

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Applications of Autoencoder

GitHub Link: <https://github.com/bhanuchandrika99/NNDL_ICP_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. Use case: Stacked autoencoder.

**In class programming:**   
  
1. Add one more hidden layer to autoencoder   
2. 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   
3. Repeat the question 2 on the denoisening autoencoder   
4. plot loss and accuracy using the history object.

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Addition of one more hidden layer to autoencoder. Also, prediction on the test data.  
Visualization of one of the reconstructed version and Visualization using same test data before reconstruction using Matplotlib

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Repeating the question 2 on the denoisening autoencoder.  
Prediction on the test data.Visualization of one of the reconstructed version

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Visualization using same test data before reconstruction using Matplotlib

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Plotting loss and accuracy using the history object.

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A graph of training loss and training accuracy

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