Task 3

Github\_file Name: Task 3

**Project 1**

1. Trained a fully connected net for MNIST classification (sorry, no CNN please, yet). It should be with 5 hidden layers each of which is with 1024 hidden units. Feel free to use whatever techniques you learned in class. You should be able to get the test accuracy above 98%.

t-Stochastic Neighbor Embedding (tSNE) or Principal Component Analysis (PCA) are useful tools to reduce the dimension of your data and visualize. By using them, you can reduce the dimension of your data, for example, down to 2D space, so that you can scatter plot your data samples. Feel free to use whatever implementation you can find for tSNE and PCA.

**Project 2**

Speech Denoising Task using Convolutional Neural Network

built a simple deep learning-based speech denoiser that takes a noisy speech spectrum (speech plus chip eating noise) and then produces a cleaned-up speech spectrum