CECS 551
Assignment 6
Total: 30 Points

General Instruction

- Submit uncompressed file(s) in the Dropbox folder via BeachBoard (Not email).

1. Design neural networks to classify hand written numbers using `keras` library, however **WITHOUT** including convolutional layers.

   (a) Design neural networks and implement them.

   - Find `Assignment_6_mnist.ipynb` and `mnist.zip`.
   - Unzip `mnist.zip` and locate the files in 'mnist' folder.
   - `train_X` and `test_X` are list of intensities in 8-bit gray scale of 28×28 images.
   - `train_y` and `test_y` are list of integers which are the classes of the corresponding images.
   - The objective of the networks is classifying images into 0 to 9.

   (b) (30 points) Report the **top three best** network designs and their test accuracies separately as Figure 1. Submit `html` and `ipynb` files which include your source codes and `pdf` file which includes your report.

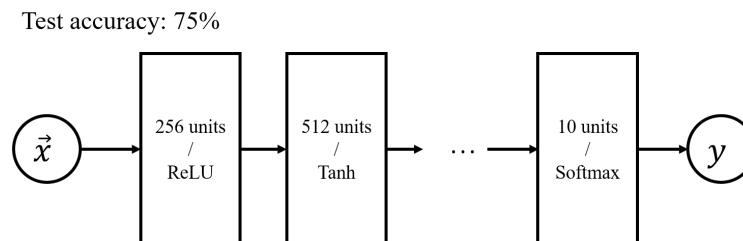   (c) (Extra points) Based on the best test accuracy of each group, Rank #1 group will receive extra 5 points and Rank #2 group will receive extra 3 points.

Figure 1: A network design example