EE5934/EE6934 DEEP LEARNING HOMEWORK #1

Introduction

The aim of this exercise is to familiarize students with the initial stages of typical image classification pipelines as well as provide an opportunity to enhance proficiency in writing code with the **NumPy API for Python**.

Please ensure that you have installed Anaconda Python (version 3.7) in your computer as well as the Jupyter Notebook, a web-based interactive Python interpreter that allows users to type and run Python code in a web browser.

Getting ready

Download homework.zip from LumiNUS and unzip it. It consists of folders HW1 and data. To begin the homework, start the Jupyter Notebook server and proceed to complete HW1/HW1.ipynb according to the instructions provided.

Fashion Mnist Dataset

For this homework assignment, we will use the Fashion Mnist dataset. Fashion Mnist is a dataset of Zalando's article images—consisting of a training set of 60,000 examples and a test set of 10,000 examples. Each example is a 28x 28 grayscale image, associated with a label from 10 classes. You can learn more the Fashion Mnist dataset from here.

Submitting your completed Homework#1 (Deadline: 11:59am Feb. 27 (Sun.))

1. Export your notebook file HW1.ipynb to an html page and include it in the HW1 folder by selecting the following sequence in the menu bar of Jupyter Notebook: File → Download as → HTML(.html). Please make sure that the **submitted notebooks have been run and the cell outputs are visible**.

2. Compress the HW1 folder into a zip file and rename it as "YourStudentNumber_HW1.zip" before uploading it to LumiNUS.

NOTE:

1. Strictly follow the above instructions when submitting your completed assignment.
2. Do **NOT upload any data file** and do **NOT include your name in the filename**.
3. Do **NOT share your solution code** with others. You should submit your own work/code.
4. There will be **penalties** for cheating and late submissions.