# [CS-8395 Spring 2020] Deep Learning in Med. Image Computing

## Assignment 0: Eligibility Test

### I. Purpose:

1. The ability of basic python coding is the minimal requirement of taking this class.
2. Set up the development environment (anaconda, virtual python environment, PyCharm, PyTorch, conda packages management).
3. Run the most canonical experiment MNIST using deep learning.
4. Setup the basic deep learning code for 2D image classification.

### II. Grading and Submission

1. The assignment will be evaluated in a total of 100 scores (as red color text)
2. The assignment should be submitted in TWO formats:
   i) A single PDF report file should be submitted to brightspace https://www.vanderbilt.edu/brightspace
   ii) The same PDF file should also be printed (color/black) and please bring it to class.
3. The deadline is **4:00pm on Jan 09** for both e-submission and hardcopy.
4. Don't forget to put your name and VUID on the first page of the PDF.

### III. Tasks:

The following tasks can be run on Windows, Mac or Linux, with/without GPU.

1. Task 1. Anaconda Set Up
   i) Install Anaconda https://www.anaconda.com/download/.
   Show a screenshot of the results of the command "conda list anaconda". (10 scores)
   ii) Create virtual environment with Python 3.6 using the command "conda create –name python36 python=3.6" to create the "python36" environment using Python 3.6.
   Show a screenshot of the results of the command "source activate python36". (10 scores)
2. Task 2. PyTorch Installation
   i) Install PyTorch using the conda command on https://pytorch.org/ in the python36 virtual environment.
   Show a screenshot of the version of installed PyTorch the command " python -c "import torch; print(torch.__version__)" ". This command can be varied among OS. I only need to see the PyTorch is installed with the latest version. (10 scores)
3. Task 3. PyCharm Installation and setup
   i) Install the Python development GUI PyCharm from https://www.jetbrains.com/pycharm/download
   Show a screenshot of the PyCharm workingspace (10 scores)
   ii) Set up the interpreter for PyCharm as the python36 conda environment.
   Show a screenshot of the "project interpreter" in PyCharm (10 scores)
4. Task 4. Run the MNIST classification

i) Run the “Basic MNIST example” on
https://github.com/pytorch/examples/tree/master/mnist
Show a screenshot of running results from PyCharm or command line window. (25 scores).

5. Understand the code “**main.py**” you just run.
   i) Describe the major parts of the code using your own words.
   You can put them as comments or write a separate paragraph to describe the code. Both are fine for me. Please put one of them in the PDF report. (25 scores)