Assignment 4&5 Combined (20 marks)

Due week 9 before class time

Given histology images:
1. Artifacts
2. Cancer Regions
3. Normal Regions
4. Others

Build a CNN to perform 4-class classification. Do not download CNN online, construct your own.

Perform tuning of parameters such as learning rate, rate decay, dropout, network architecture adjustment, weight decay, early stopping and use many other tricks

Images are ordered by index for each class. Take the first 100 images from each class as your test set. Use the rest for training and validations.

You are not allowed to touch these first 100 images in all your network deign and tuning.

Generate a plot of test accuracy versus total number of images used in your training set. Start from a total of 40 training images to the maximum that you can use.

Try to achieve as high test accuracy as possible with as few training images as possible.