

Prog Asg 2: Image classification and segmentation

Start Assignment

Due Saturday by 23:59 **Points** 200 **Submitting** a file upload **Available** 15 Sep at 0:00 - 22 Oct at 23:59

This assignment will be about analysis of OCT images

Assignment writeup: [Assignment 2-1.pdf \(https://canvas.instructure.com/courses/7524644/files/229086097?wrap=1\)](https://canvas.instructure.com/courses/7524644/files/229086097?wrap=1). [↓](https://canvas.instructure.com/courses/7524644/files/229086097/download?download_frd=1)
(https://canvas.instructure.com/courses/7524644/files/229086097/download?download_frd=1)

Datasets are posted here: https://drive.google.com/drive/folders/1hQDnbCltsiGjdS5p8cHi_oUyhL89fFsO [↗](https://drive.google.com/drive/folders/1hQDnbCltsiGjdS5p8cHi_oUyhL89fFsO)
(https://drive.google.com/drive/folders/1hQDnbCltsiGjdS5p8cHi_oUyhL89fFsO)

Step 1: [60 marks] Create appropriate neural network architectures (at least 3) using existing pre-trained models (ImageNet). You may perform image pre-processing and feature extraction to improve accuracy.

Step 2: [100 marks] Perform training and select a network based on validation accuracy. During training, try various activation functions, vary the learning rate OR use learning rate schedule, and add regularization to avoid over-fitting.

Step 3: [40 marks] Predict on the test examples. You may choose to implement ensembles. You may perform model fusion.



