Assignment 3 Training a deep network for semantic segmentation
February 3, 2020

Objective
- Learn PyTorch and helper libraries
- Understand VOC Semantic Segmentation Dataset
- Create data transforms to augment the dataset
- Create the neural network
- Train and evaluate the neural network

Resources and Instructions
Environment Setup:
We recommend using Google Colab to complete this assignment.
Upload the assignment ipynb file to google collab
   - Runtime -> change runtime type
   - Set hardware accelerator to GPU

Assignment:
Complete the two sections within the ipynb assignment file and run all cells. Reviewing the tutorial powerpoint and mnist ipynb file will be helpful.

Deliverable HTML output:
In the Jupyter notebook, go to File > Download as > HTML (.html) Submit a ZIP file containing the HTML output. Please follow the naming convention of your zip file: a3_<user_id>.zip

Due Date
11:59 pm, February 12, 2020
No late submissions will be accepted. There will be no extensions.

Marking Scheme

This assignment is out of 10 marks.
   - 2 marks for implementing the data augmentation section
   - 8 marks for implementing a neural network
        o 8 marks will be given for an mIoU of at least 40% on the validation dataset.

Policies
Collaboration
You can discuss the problem with peers, but you must design and implement your own solution independently.

Use of online resources
You may consult online resources for inspiration, but you must develop your own code.