E9 246: Assignment 2 (Due 20 Feb, 2022)

1. Data: Choose around 3-4 images, some can be synthetic, others should be natural images (you can use PASCAL VOC dataset). Choose the images to be of different types, eg. of different difficulty level as judged by you.

1) (Marks = 4) Implement nCut algorithm (2 segments). Analyze for 2 different similarity measures.

2) (Marks = 4) Using the FCN approach (available code), segment the natural images and report the qualitative and quantitative results.

3) (Marks = 4) Choose one image classification backbone, and modify the last FC layers as taught in class (FCN paper). You can omit the skip connection part. If required, take help from the original code, but do it yourself. Segment the images as in Part 2.

In your report, you should include:
- details of implementation (not method), any variants of the available codes you tried, side by side results of the two approaches and your detailed observations and analysis.
- These two algorithms cannot be compared directly. Qualitatively compare the two approaches (in terms of high-level idea, training, testing, results).

Total Marks = 20 : 12 marks for completing all parts of the assignment, 5 marks for analysis, 3 marks for writing report properly (brief and to-the-point report will be preferred).