

Objective: To research the implementation of convolutional neural networks to do object detection/segmentation/classification

For this assignment, you will need to do the following:

1. Identify a domain for this research assignment: **Classifying clothing items**
2. Identify the research focus, i.e., object detection, segmentation, or classification:
Classification
3. Either construct a training data set from scratch or use the existing data set from sources like GitHub, Kaggle, or online repository: **Fashion MNIST**
4. Research a technique to train a convolutional neural network on the data set you identified in step 3.
5. Test your trained model with a new unseen data and report the output of your model.

Report:

You will need to turn this assignment before the due date. Your assignment should include the following:

- a. Your response to step 1 above (i.e., the domain you identified for this assignment)
- b. Discuss your research focus and reasoning for its selection.
- c. Describe your data set, i.e., provide details about the number of data points, size, dimensions, etc., applicable to your data set.
- d. For step 4, It is recommended that you include your code that implements the training of a convolutional neural network. You can include the output/snapshot of the run of your model in this file.
- e. Discuss the results that your model produced for any unseen data used to test it.