

42028: Deep Learning and Convolutional Neural Network

Week 3

Instructions:

Setup Google Colab and Google Drive:

- Login to your Google Drive using your Student/personal email address
- Under “42028” folder, you should find “Week3” folder. *Please note folder should be already there if you have executed the setup script in week-1.*
- From Canvas, download the following notebooks and dataset
 - 1. Handcrafted Feature Extraction: Part-1.ipynb**
 - 2. Handcrafted Feature Extraction: Part-2.ipynb**
 - 3. LogisticRegression-NeuralNetwork-Part-1.ipynb**
 - 4. Fashion MNIST Dataset (Link available on Canvas),** unzip and upload them to “Week3” folder on your Google Drive.

Tasks for Week3 are:

1. **Task -1:** Extraction of LBP features from fashion MNIST dataset and classification using SVM multiclass classification:
2. **Task -2:** Extraction of HoG features from fashion MNIST dataset and classification using SVM multiclass classification
3. **Task 3:** Implement activation function and loss function for Logistic Regression.
 - a. Complete the function **sigmoid(z)**
 - b. Complete the function **loss(a, y)**