CS4347 Introduction to Machine Learning - Homework 2

Data Set Information:

Fashion-MNIST consists of 60,000 training images and 10,000 test images. It is a MNIST-like fashion product database. Each example is a 28x28 grayscale image, associated with a label from 10 classes. We intend Fashion-MNIST to serve as a direct drop-in replacement for the original MNIST dataset for benchmarking machine learning algorithms. Each image is in greyscale and associated with a label from 10 classes.

Label Information:

Each training and test example is assigned to one of the following labels:

Label Description

0 T-shirt/top

1 Trouser

2 Pullover

3 Dress

4 Coat

5 Sandal

6 Shirt

7 Sneaker

8 Bag

9 Ankle boot

Submission (Due: May 3rd, 2019)

The data is stored in the same format as the original MNIST data. For example, you can use 'mnist_reader.py' to load the data. Please use any deep learning methods learned in the class (e.g., CNN) to perform this image classification task. Please submit a report (less than 4 pages) and the code to TRACS showing how you perform this task and results you achieve. Please also include some graphs in the report.