Case 5
MNIST Fashion Dataset

1. Introduction

Your task is to build an image classifier with Keras and Convolutional Neural Networks for the Fashion MNIST dataset. This data set includes 10 labels of different clothing types with 28 by 28 grayscale images. There is a training set of 60,000 images and 10,000 test images. It is up to you to determine the number of CONV, POOL and FC layers but make sure to test for overfitting.

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

2. Loading the Dataset

Run the following lines in Python:

```
from tensorflow.keras.datasets import fashion_mnist
(x_train, y_train), (x_test, y_test) = fashion_mnist.load_data()
```

3. Case Instructions

Save the following screenshots in a word file and submit before the deadline:

- model.summary()
- Accuracy of the Model
- Steps done to account for overfitting
- Predictions for the first 10 rows of the test data.

Answer this case individually. Zip the Python File and Word File with filename: "**Case 5 – Surname.zip**". Submit it in UVLE before the stated deadline.

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