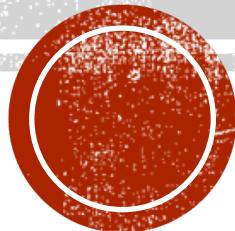


HW10 - PREVIEW

Data-X GSI Team



BEFORE YOU START

- [Neural Network slides](#)
- [CNN slides](#)
- [TensorFlow Sample Code](#)
- [CNN Sample Code 1](#)
- [CNN Sample Code 2](#)
- [Keras – The Sequential Model](#)



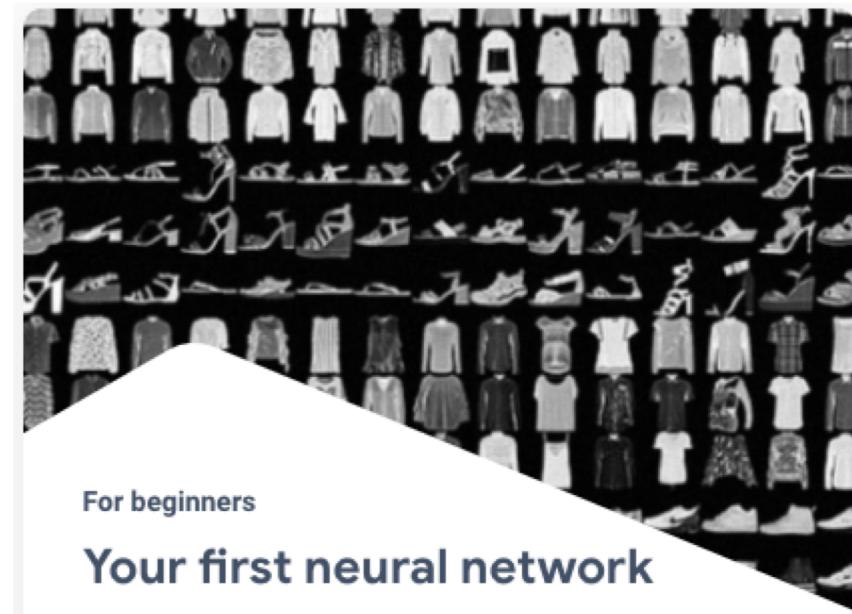
INSTALL LATEST TENSORFLOW

- pip install tensorflow



Neural Networks

Berkeley DATA X



Train a neural network to classify images of clothing, like sneakers and shirts, in this fast-paced overview of a complete TensorFlow program.



FILES IN THE DOWNLOAD PACKAGE

- **Hw10-NN.ipynb:**
 - The Jupyter Notebook helps you learn the data set and check the results.
- **NN.py**
 - Where you write codes and train the model.

```
...
TO DO
# Decide how many epochs you want
...
model.fit(train_dataset, epochs=5, steps_per_epoch=math.ceil(num_train_examples/BATCH_SIZE))
```

```
...
TO DO
# Add layers sequentially
Keras tutorial is helpful: https://www.tensorflow.org/guide/keras/sequential\_model
The score you get depends on your testing data accuracy.

0.00 <= test_accuracy < 0.85: 0/18
0.85 <= test_accuracy < 0.86: 3/18
0.86 <= test_accuracy < 0.87: 6/18
0.87 <= test_accuracy < 0.88: 9/18
0.88 <= test_accuracy < 0.89: 12/18
0.89 <= test_accuracy < 0.90: 15/18
0.90 <= test_accuracy < 1.00: 18/18

...
#####
# TO DO #####
#####
```



GRADING

The score you get depends on your testing data accuracy

- `0.00 <= test_accuracy < 0.85`: 0/18
- `0.85 <= test_accuracy < 0.86`: 3/18
- `0.86 <= test_accuracy < 0.87`: 6/18
- `0.87 <= test_accuracy < 0.88`: 9/18
- `0.88 <= test_accuracy < 0.89`: 12/18
- `0.89 <= test_accuracy < 0.90`: 15/18
- `0.90 <= test_accuracy < 1.00`: 18/18

**** Don't Use Testing Data to Train the Model. We Will Check Your Codes. ****



SUBMISSION

- Compress `my_model` (generated by TensorFlow in `NN.py`) & `NN.py` in the same zip file and upload it to Gradescope.
- Please make sure the result you got on Gradescope is the same as the result on your local Jupyter Notebook (public tests).

