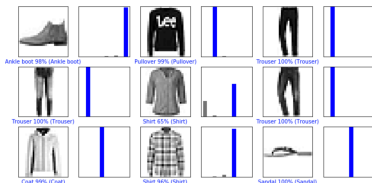


CMSC 471.3  
Artificial Intelligence

Project 4  
Due: 19-May-2019  
20 points

*Classification*

The MNIST database is a large database of handwritten digits. The MNIST database contains 60,000 training images and 10,000 testing images. The fashion-MNIST database also contains 60,000 images, but of items such as angle boots and sandals.



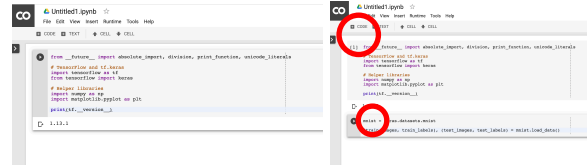
The objective of this project is to train your first neural network for *digit classification* by closely following an example based on the fashion-MNIST dataset.

Setup

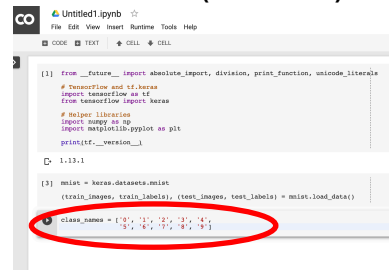
0. Goto [https://www.tensorflow.org/tutorials/keras/basic\\_classification](https://www.tensorflow.org/tutorials/keras/basic_classification)
1. Click on “Run in Google Colab”
2. Click away the Table of Contents
3. A section with no “[ ]” is a text cell.
4. Each section with a “[ ]” preceding it is a code cell. Click on the “[ ]” to run the code cell.
5. There are 28 code cells (not counting the two about licenses). Run each code cell, and do so sequentially, as cells may depend on the results of other cells.
6. Read the text cells as you go (useful for the take-home quiz).
7. Complete running all 28 code cells.

TODO

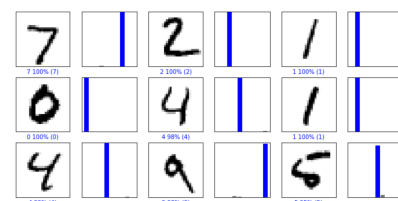
0. Open a new notebook in a separate browser tab using:  
File > New Python 3 notebook
1. Copy the first code cell from the fashion notebook and paste to your new notebook (and run it)



2. Add a code cell using the “+ CODE” button and paste the second code cell from the fashion notebook here. Change *fashion\_mnist* to *mnist* here as shown above (and run it)
3. Add another code cell and copy the third code cell from fashion and paste here. Change the values as shown below (and run it):



4. From this point onwards, copy the remaining 25 code cells from fashion to the new notebook. No modifications are necessary. Directly copy and paste. (Suggested workflow: add a code cell to the new notebook, populate it by copying from the fashion notebook, hit run, and repeat.)
5. Print your *entire* notebook as a PDF and email it to me.



END