CMSC 510 – Fall 2022

Homework Assignment 4

Announced: 11/13

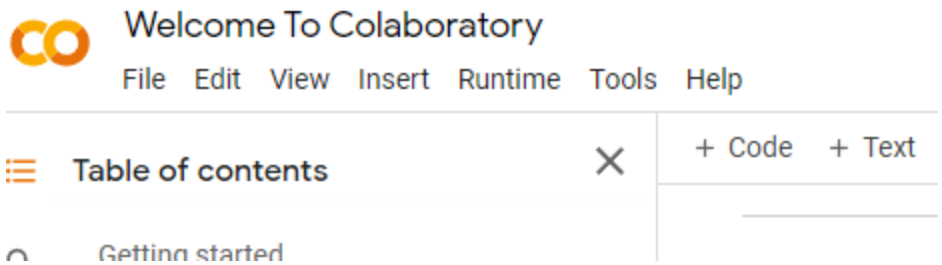
Due: Thursday, 12/8, 5pm

The problem

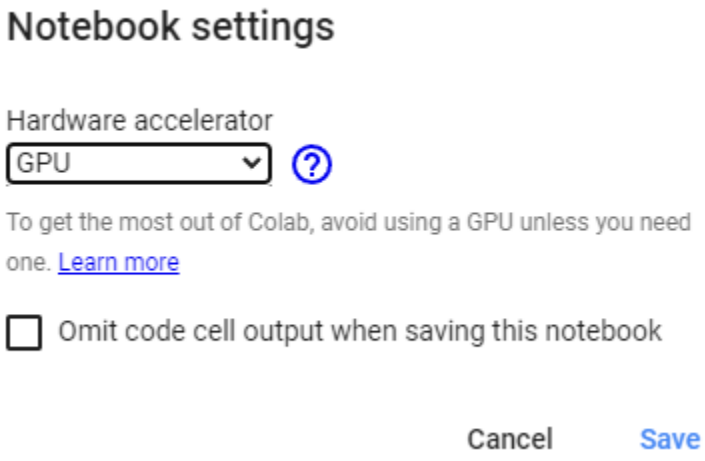
- Train convolutional network models for recognizing **CIFAR10** 32x32 RGB images
- Train three models:
  - The simple network using the code from Canvas
  - ResNet18 (see L19) trained from scratch (pretrained=False)
  - ResNet18 with transfer learning (pretrained=True)
- Use similar number of epoch, compare accuracy on the training set during epochs of training. Which network performs best?

Using colab

- https://colab.research.google.com/



- Click: File->NewNotebook to create new notebook for your code
- Before running, click: Runtime->Change Runtime Type
  - Select GPU



Returning the Assignment

- Solution code should be written by you and you only (no web/book/friend/etc. code)

- Upload through Canvas
  - A jupyter notebook that contains:
    - Plot of the accuracy during epochs of training, for all three network. Include short paragraph discussing the results.
    - Code in python for training the networks