Assignments due on 17/03/2021

Assignment 4.

* Download and read train data from CIFAR 10 from 10 classes
* Use only one layer of neural network. Make the layer fully linear.
* **class\_score** = W\*X + b. Where W is the weight matrix, **X** is 3072 length vector. So b is also a 10 length vector for 10 classes. class\_score is also a 10-vector
* Don’t use any sigmoid function in the neural network
* Write forward(X) function to implement the forward calculation.
* Calculate the loss using the SVM\_LOSS
* Using the calculated loss, use autograd and backward() to calculate the derivatives automatically.
* Write codes for training module for 50 epochs to train the neural network.
* Report your accuracy on the test set
* Show confusion matrix of your test prediction
* After training, show the image for each row of the **W** to see the corresponding class pattern**.** Provide the title with the corresponding class name.