Google Colab Results

I conducted a brief Convolutional Neural Network over 3,3 and 5,5 kernel sizes within Google Colab. My immediate observation is that my loss decreased, and my accuracy improved with increase in kernel size. My results for the 3x3, and 5x5 are as follows:

|  |  |  |
| --- | --- | --- |
| Kernels | Test loss: | Test accuracy: |
| 3x3 | 0.06808531284332275 | 0.9781000018119812 |
| 5x5 | 0.05063639581203461 | 0.9835000038146973 |

The Following our my results from my Test and Train samples against my trained convolutional neural network in the JuptyerLab for my test, and train sets that were randomly generated.

|  |  |  |
| --- | --- | --- |
| Test Sample | Test loss: | Test accuracy: |
| Train | .578 | 0.769 |
| Test | .624 | .733 |

The evaluate() function from Coursera lab

A screenshot of a computer program

Description automatically generated  
 Plots: Training and testing accuracy vs epochs; Training and testing loss vs epochs.

A graph with a line

Description automatically generatedA graph of a train loss

Description automatically generatedA graph with a line

Description automatically generatedA graph with a line

Description automatically generated

Conclusion

As we can see here, we have the training accuracy higher and loss being lesser than the test set as expected. As the Epoch’s increase the accuracy and loss decreases. The code of the evaluate() function looks to review the accuracy and loss of the train\_sample, test\_sample through the semi-trained model of the CNN utilizing the provided layers. As the epochs improve so does the accuracy, and the loss decreases.