Neural Network Assignment - 7

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1. Follow the instruction below and then report how the performance changed.(apply all at once)

* Convolutional input layer, 32 feature maps with a size of 3×3 and a rectifier activation function.
* Dropout layer at 20%.
* Convolutional layer, 32 feature maps with a size of 3×3 and a rectifier activation function.
* Max Pool layer with size 2×2.
* Convolutional layer, 64 feature maps with a size of 3×3 and a rectifier activation function.
* Dropout layer at 20%.
* Convolutional layer, 64 feature maps with a size of 3×3 and a rectifier activation function.
* Max Pool layer with size 2×2.
* Convolutional layer, 128 feature maps with a size of 3×3 and a rectifier activation function.
* Dropout layer at 20%.
* Convolutional layer,128 feature maps with a size of 3×3 and a rectifier activation function.
* Max Pool layer with size 2×2.
* Flatten layer.
* Dropout layer at 20%.
* Fully connected layer with 1024 units and a rectifier activation function.
* Dropout layer at 20%.
* Fully connected layer with 512 units and a rectifier activation function.
* Dropout layer at 20%.
* Fully connected output layer with 10 units and a Softmax activation function

Graphical user interface, text

Description automatically generated

Final Accuracy : 63.66 %

Any change in performance? Ofcourse, **Yes**

1. Predict the first 4 images of the test data using the above model. Then, compare with the actual label for those 4 images to check whether the model has predicted correctly.

Text

Description automatically generated

Text

Description automatically generated

Graphical user interface, text

Description automatically generated

Accuracy 55.26%; The model has predicted correctly.

1. Visualize Loss and Accuracy using the history object

Graphical user interface, application

Description automatically generated

Chart, line chart

Description automatically generated

Loss and Accuracy using the history object.

Git hub: https://github.com/Srujana-Konda/Assignment-7