PYTHON

DEEP LEARNING

ICP – 2

Authored By

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**Lesson Overview:**

In this lesson, we are going to discuss Neural Network, Backpropagation, Activation Function, Linear Regression, Cost/Loss Functions, Gradient Descent (Optimization Algorithm) and Learning Rate.

**Use Case Description:**

Image Classification on the hand written digits data set

**In class programming:**

1. Using the history object in the source code, plot the loss and accuracy for both training data and validation data.

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1. Plot one of the images in the test data, and then do inferencing to check what is the prediction of the model on that single image in the test data

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1. We had used 2 hidden layers and relu activation:
2. Try to change the number of hidden layer and the activation to tanh or sigmoid and report what happens.

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1. Run the same code without scaling the images, how the accuracy changes?

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**\*\* Bonus point:**

1. Convert the sequential model to API model.

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