Abstract:

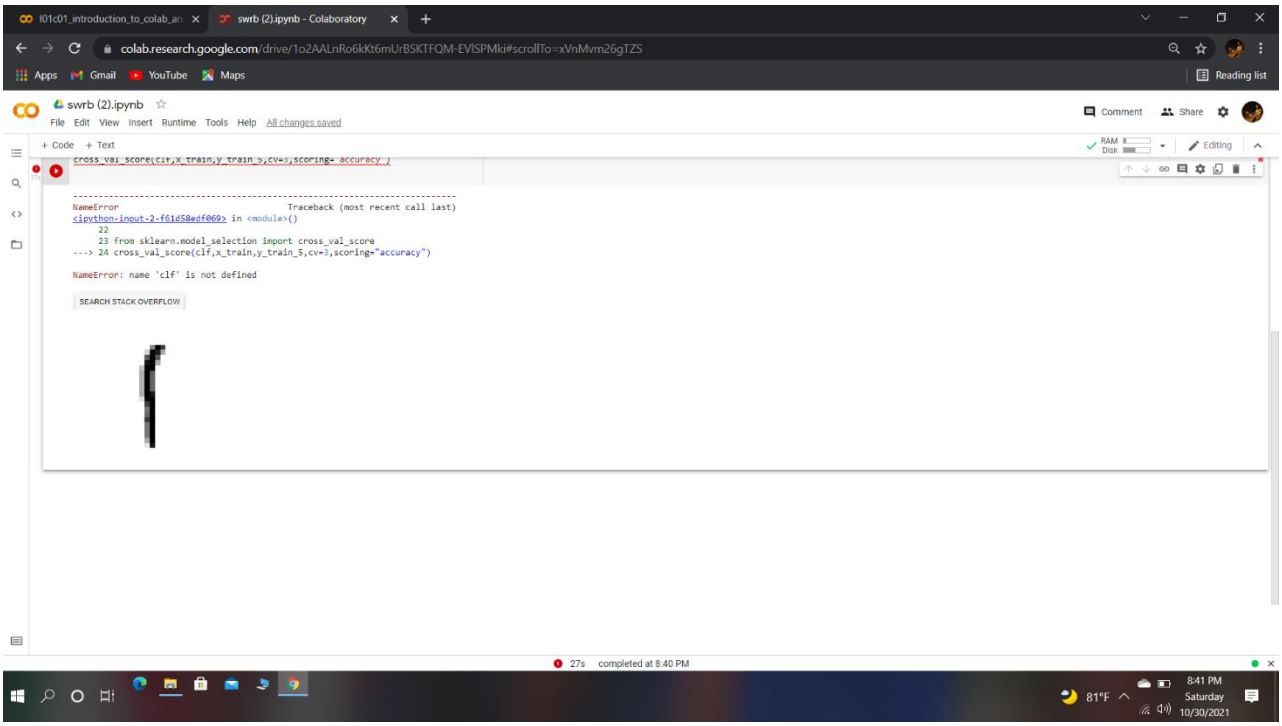
The MNIST handwritten digit classification problem is a standard dataset in computer vision and deep learning.The datasrt is sloved,it can be use the basis for learning and practicing how to develop,evaluate and also convolutional deep learning neural networks for image classification from scratch.

Introduction:

The MNIST dataset is an acronym that's stands for the modified natural institute of standards and technology dataset.It is a dataset of 60000 small square 28x28 pixel,grayscale images of handwritten single digits between 0 and 9.It is a widely used and deeply understood dataset and for the most part is sloved.Top performing models are deep learning convolutional neural networks the achieve a classification accuracy of above 99%,with an error rate between 0.4% and 0.2% on the hold out test dataset. The example below loads the MIST dataset using the Keras API and creates a plot of the first nine images in the training dataset.

Results:

About my result,I have done my work in Google colab.I have found 88% accuracy in my project-work.



Discussion:

At first,I was import the fetch_openml from the sklearn.datasets library. Then create a variable mnist, and store in it the mnist_784 dataset from the featch_openml. Create array variables x and y. Store in them the data i have 784 (28x28) pixels of features, and these are now stored in X, since the data, i stored to the 3130th element, the image was shown and that was 1 digit of number. If i talk about my accuracy, cross-validation increases the efficiency of the model. So that i would like to use cross-validate in my model, and The output was 88%.