

Test With Saved Model

Team ID: PNT2022TMID28890

Project Name: A Novel Method For Handwritten Digit Recognition System

Team Leader: Karthikeyan.V

Team Member: Karthikeyan.J, Periyasamy.A, Sabarimanikandan.M

Now open another jupyter file and write the below code

Taking images as input and checking results

```
# Importing the Keras Libraries and packages
from tensorflow.keras.models import load_model
model = load_model(r'C:/Users/DELL/Hand written recognition System/models/mnistCNN.h5')
from PIL import Image#used for manipulating image uploaded by the user.
import numpy as np#used for numerical analysis
for index in range(4):
    img = Image.open('data/' + str(index) + '.png').convert("L")# convert image to monochrome
    img = img.resize((28,28))# resizing of input image
    im2arr = np.array(img) #converting to image
    im2arr = im2arr.reshape(1,28,28,1) #reshaping according to our requirement
    # Predicting the Test set results
    y_pred = model.predict(im2arr) #predicting the results
    print(y_pred)

[[1. 0. 0. 0. 0. 0. 0. 0. 0. 0.]]
[[0. 1. 0. 0. 0. 0. 0. 0. 0. 0.]]
[[0. 0. 1. 0. 0. 0. 0. 0. 0. 0.]]
[[0. 0. 0. 1. 0. 0. 0. 0. 0. 0.]]
```

Firstly we are loading the model which was built. Then we are applying for a loop for the first four images and converting the image to the required format. Then we are resizing the input image, converting the image as per the CNN model and we are reshaping it according to the requirement. At last, we are predicting the result. You can use predict_classes for just predicting the class of an image.