CONTENTS

- create_img_data.py - to create images data to feed the model.
- mainCNN.py - the covolution neural network model.
- predict.py - to make the predictions using the CNN model.

REQUIREMETS

- ✓ OS - pip3 install os
- ✓ CV2 - pip3 install opencv-python
- ✓ TENSORFLOW - pip install tensorflow==2.0.0-alpha0
- ✓ KERAS - pip3 install keras
- ✓ NUMPY - sudo apt install python3-numpy
- ✓ MATPLOTLIB - sudo apt-get install python3-matplotlib

(for all NUMPY, MATPLOTLIB, SCIPY sudo apt install python3-numpy python3-scipy python3-matplotlib)

- ✓ SKLEARN - pip3 install -U scikit-learn
- ✓ PYTHON 3 - install python3
- ✓ RANDOM & TABULATE

ABOUT

This is my mini_project based on the idea of recognizing numeric gestures(i.e the count of no.of fingers). This project uses convolution neural network model(CNN-model) to classify the images into one of the labels(which are zero, one, two,three,four, five). A convolution neural network (CNN) is a type of artificial neural network used in image recognition and processing that is specifically designed to process pixel data. To build a CNN-model I used python3 and keras. Keras is a high-level neural networks API, written in Python and capable of running on top of TensorFlow, CNTK, or Theano. It was developed with a focus on enabling fast experimentation.

[1]. DATASET SOURCE : https://www.kaggle.com/ardamavi/sign-language-digits-dataset