BVRIT HYDERABAD
College of Engineering for Women
Department of Information Technology

Major Project - Academic Year 2016-20

TEAM 1

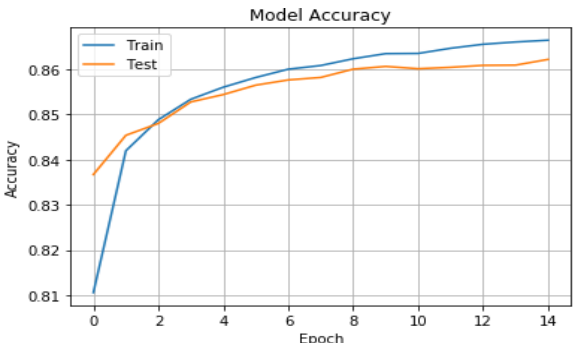
Handwritten Character Recognition

Abstract

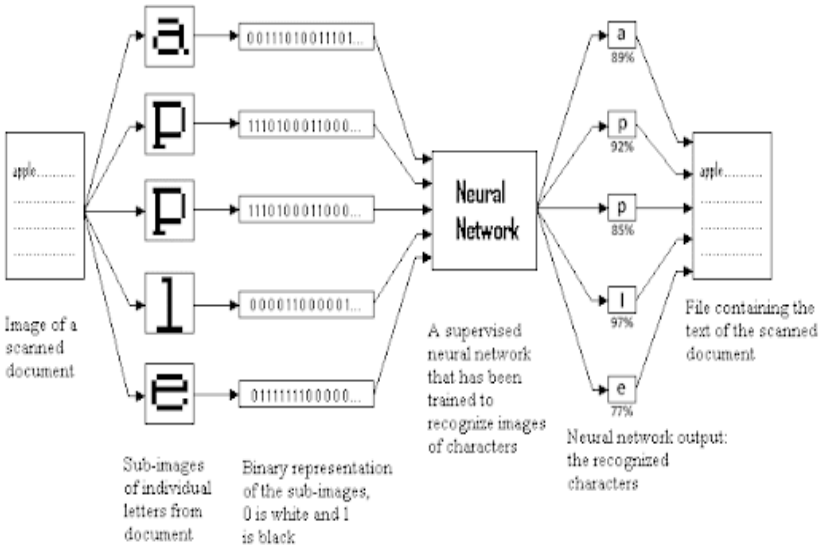
Character recognition is one of the most important research fields of image processing and pattern recognition. Handwritten Character recognition is the process of electronic translation of handwritten images or typewritten text into machine editable text. It becomes very difficult if there are lots of paper based information on companies. Computer can work much faster and more efficiently than human. So computer cannot distinguish character or word from scanned image. So Convolutional Neural Network based English HCR method is used as a deep machine learning method for which it doesn't want to extract the features and also fast method for character recognition.

Modules

Data Preparation
Model Building
Training and Results



Architecture



Tools and Technologies

- **Matplotlib**
- **OpenCv**
- **Tensorflow**
- **Keras**
- **Numpy**

Conclusion and Future Scope

Handwritten character recognition plays a major role in optical character recognition and pattern recognition. Earlier handcrafted feature methods were used for character recognition, which are efficient and requires much effort and time. One of the best alternative for conventional handcrafted features was to use deep learning techniques for character recognition. As part of the future scope, we are trying to increase the complexity from characters and word recognition level to sentence and paragraph recognition level.

Guide

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