**CAPSTONE PROJECT**

**Handwriting Recognition using Deep learning**

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**Abstract:**

Character recognition is one of the emerging fields in the current technical world. One of the most abilities of humans are they will recognize any object or thing. So hand transcription can easily be identified and understood by Humans, but computer cannot identify as easily as humans because different handwriting has different patterns to spot. Thus hand transcription cannot be identified by the machine and it is difficult to spot the text by the system.

This project is built based upon the most vital and integral concepts of Deep learning and Conventional Neural Networks, along with the essential libraries and tools like Tensorflow, Keras, Open CV. The input image is processed and the features are extracted. Further, in this process of text recognition, classification schema along with training the system is done so that, the system can acknowledge the input text. As the system is trained, it has the capability to seek out the similarities and the differences among various handwritten samples. Finally the application takes the image of a handwritten word and converts it into a digital text and gives it as the output.

**Requirements Specification:**

* Python
* Numpy
* OpenCV
* Tensorflow