Name: Thejaswini R

Reg. No.: 20ETAI410049

**TITLE: OPTICAL CHARACTER RECOGNITION**

**Introduction**

Optical Character Recognition Technology (OCR) is a technology that recognizes and pulls out the text in scanned images and photos. OCR allows us to quickly and automatically digitize a document without the need for manual data entry. The output of OCR is further used for electronic document editing, and compact data storage and also forms the basis for cognitive computing, machine translation and text-to-speech technologies. OCR also has several of its applications in financial, healthcare and security domains.

It is required to generate a Machine learning model combining with Deep Learning and Pattern recognition techniques with an improved accuracy to carry out the purpose.

**Problem Statement**

In the present world there is a high demand for the conversion to the printed texts in order to maintain the security of the data. It is a time taking process to manually convert the texts in the scanned images into editable texts. The basic OCR technology coverts these images into computer processed images. When we scan, the documents are saved in the computer as images in formats like JPEG and GIF. The user cannot read or change these photos. I it is highly challenging to read the individual contents and search the contents of these documents line-by-line and word-by-word in order to reuse this information. There is a great deal of demand nowadays for "saving the information present in these paper documents in to a computer storage drive and later modifying or reusing this information by searching procedure.

**Applications**

OCR has plenty of applications. A few of them are listed below:

* Passport recognition in Airports
* Automation of Data Entry
* License plates recognition
* Extracting business card information into a contact list
* Converting handwritten documents into electronic images
* Creating Searchable PDFs
* Create audible files (text to audio)

**Proposed Methods**

OCR is able to recognize the text in the scanned documents and images into an accessible electronic version with text and it will convert into documents. The OCR technology allows for us to search the text by words found within the document. In the following Implementation we shall use Tesseract OCR, a common OCR technology and to read the images we use OpenCV.