# Optical Character Recognition [OCR] of Hindi Language using Deep Learning Techniques

**Objective:** We aim to build an OCR model that will recognize the characters in a given document using Deep Learning Techniques

**Project Description:** We will be using algorithms developed using Deep Learning techniques to build the OCR algorithm. Deep Learning is a subset of Machine Learning wherein multi-layered neural network is developed in order to train a model to recognize the characters. Deep learning is a subset of machine learning that is used to build multi-layered neural networks that helps in recognition and decision making. The neural network (model) is trained using a training dataset which will be a collection of Hindi characters and as this data passes through the various layers of neurons in the network it learns how to identify each characters by capturing the various features unique to each character. It is also possible to build on the model to recognise and read out the text input to the model. As an output of the project a prototype will be made which can recognize and convert Hindi sentences into Hindi text form. The applications for the same are enormous. Some of them include extracting content from old text, searching a page or a text book, helping the blind and illiterate read.

**Project Completion Time:** Mid Term (upto 1 year)

**Student Skills Required:** Machine learning and deep learning techniques with image processing fundamentals.

**Number of Students Required:** 3 (UG)

1. Asheesh Kumar (14458)
2. Anchal (14443)
3. Akhil (14479)

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**Any Other Details:** Requires one GPU to train and apply machine learning algorithms and the estimated budget is Rs. 70,000/-