

## **BACKGROUND STUDY**

### **Paper1 link:-**

[https://www.researchgate.net/publication/322801922\\_Handwriting\\_Recognition\\_Methods](https://www.researchgate.net/publication/322801922_Handwriting_Recognition_Methods)

### **Objective and motivation of the work:**

Today, in a modern age paper written documents are needed to digitize and save in computer hard disks. That's why already handwritten documents are trying to digitalize. If we use people to do that, it will be much more difficult and time consuming. So, we use the Handwriting Recognition method. By using such a system we can easily convert our Handwritten paper into digital paper.

### **Proposed methodology in the work:**

There are two types of group of Handwriting recognition, they are, Affective(Online) and Ineffective(Offline) method. Affective method is like an automated system. It normally electronic tablets the coordinate of the pen movement by the handwriting automatically systems. Ineffective method consists of 5 processes like Pre-amplification, Segmentation, Attribute extraction, Recognition and post processing

### **Contribution of the work:**

In this paper they successfully describe some method for handwriting recognition . By using that written paper it can be easily stored on the computer.

### **Lacking of the work:**

There are some limitations like if the system design is dependent on a person so that only one person writing can be learned.

### **Summary:**

We can use these Affective methods for our project so that if there occurs any mistake we can solve it instantly.

**Paper2 link:-** <https://ieeexplore.ieee.org/document/9115746>

### **Objective and motivation of the work:**

In this paper researcher introduced the method for recognizing different types of handwriting from different people. Because of multiple orientation, skewness of the lines, pressure points of the connected components, overlapping characters etc. For this researcher use Optical Digit Recognition(ODR), by this method different kinds of handwriting can be recognized.

### **Proposed methodology in the work:**

Optical Character Recognition(OCR) is used for identifying the text, then printing it into machine-encoded text (the form of ASCII or Unicode). For segmentation Hidden markov model(HMM) used. KNN Algorithm and Euclidean distance formula applied to calculate nearest data from the dataset.

### **Contribution of the work:**

KNN supervised machine learning algorithm and Euclidean distance formula applied to solve their requirement. For training supervised classification machine learning model the training dataset is fed to the classifier as input with labelled data.

### **Lacking of the work:**

Their method took much time as they used KNN algorithm so this can be proliferated in future so that computation time will be decreased.

### **Summary:**

We can use the KNN algorithm for better and efficient results .