# PROBLEM STATEMENT

## Issue

One of the basic problems in the design of any pattern recognition system is the selection of a set of appropriate features to be extracted from the object of interest. Research on the utilization of moments for object characterization in both invariant and noninvariant tasks has received considerable attention in recent years. Describing digit images with moments instead of other more commonly used pattern recognition features  means that global properties of the digit image are used rather than local properties.

## Origin of problem

Every person has different writing style so it is very difficult for machine to recognize these characters. Also they look very similar, making it hard for a computer to recognise accurately. There is no possibility of obtaining information about the type of the input and the text has to be separated into characters or words.

## Why is it important to fix the problem?

The handwritten digits are not always of the same size, thickness, or orientation and position relative to the margins.

The uniqueness and variety in the handwriting of different individuals influences the formation and appearance of the digits

## Need of digit recognition system

Digit recognition system is the working of a machine to train itself or recognizing the digits from different sources like emails, bank cheque, papers, images, etc. and in different real-world scenarios for online handwriting recognition on computer tablets or system, recognize number plates of vehicles, processing bank cheque amounts, numeric entries in forms filled by hand.