VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belgaum – 590010

A PROJECT REPORT
ON

"OFF-LINE HANDWRITTEN DEVANAGARI NUMERALS RECOGNITION FOR POSTAL AUTOMATION"

Submitted in partial fulfillment of the requirements for the award of
BACHELOR OF ENGINEERING
IN
INFORMATION SCIENCE &ENGINEERING

Submitted By

Name	USN
Anceta Treeza B Fernandes	4AL09IS002
Kripa	4AL09IS007
Ramya Hebbar	4AL09IS020
Supriya	4AL09IS032

Under the Guidance of
Mr. Manjunath Kamath K., B.E., M.Tech, MISTE.
Assistant Professor
Department of Information Science &Engineering
Alva's Institute of Engineering & Technology, Moodbidri– 574 225.

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.
2012-2013

ABSTRACT

Recognition of Handwritten Devanagari Numerals is a difficult task. But it has numerous applications including those in postal sorting and bank cheque processing. In this work, a fast and effective method is proposed for recognition of isolated handwritten Devanagari numerals. Attempts in the literature employ complicated features and recognition engines in trying to cope with the variety of symbols. But this makes the process slow.

In contrast, objective of less time consumption can be achieved by either reducing the number of features by PCA or by reducing the number of samples. Even in Handwritten communication has its own stand and most of the times, in daily life it is globally using as means of communication and recording the information like to be shared with others. Challenges in handwritten characters recognition wholly lie in the variation and distortion of handwritten characters, since different people may use different style of handwriting, and direction to draw the same shape of the characters of their known script. The proposed method focuses on reduction of samples by using simple density features with utilization of hierarchical clustering to make the process fast. Still, the recognition accuracy obtained is 56.66%.