

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belgaum



**A
PROJECT REPORT
On**

“CREDIT CARD FRAUD DETECTION USING *HMM*”

**Submitted in partial fulfillment for the requirements for the award of the degree
Bachelor of Engineering
in
INFORMATION SCIENCE AND ENGINEERING**

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ABSTRACT

Now a day the usage of credit cards has dramatically increased. As credit card becomes the most popular mode of payment for both online as well as regular purchase, cases of fraud associated with it are also rising. Here we model the sequence of operations in credit card transaction processing using a Hidden Markov Model (HMM) and show how it can be used for the detection of frauds. An HMM is initially trained with the normal behavior of a cardholder. If an incoming credit card transaction is not accepted by the trained HMM with sufficiently high probability, it is considered to be fraudulent. At the same time, we try to ensure that genuine transactions are not rejected. We present experimental results to show the effectiveness of our approach and compare it with other techniques available in the literature.