

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama” Belagavi – 590 010



PROJECT REPORT ON  
CREDIT CARD TRANSACTIONS INTEGRITY  
MONITORING USING MACHINE LEARNING

Submitted in partial fulfillment of the requirements for the award of degree  
BACHELOR OF ENGINEERING  
IN  
ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING  
Submitted By

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**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi &

Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

**Accredited by NAAC with A+ Grade**

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

2023-2024

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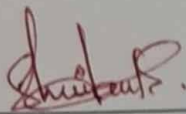
## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

### CERTIFICATE

Certified that the project work entitled "**CREDIT CARD TRANSACTIONS INTEGRITY MONITORING USING MACHINE LEARNING**" is a bona fide work carried out by

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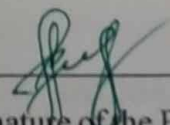
in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023-2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.



Signature of the Guide  
Mr. Shrikanth N G

KND  
21/05/2024

Head of the Department  
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Signature of the Principal  
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### EXTERNAL VIVA

Name of the Examiners

1. Harish Kumar
2. Manjunath H.

Signature with date

KND  
28/05/2024  
28/5/24

## ABSTRACT

In the domain of online transactions, the imperative need for robust Credit Card Fraud Detection Systems has become increasingly evident. This project embarks on the development of a sophisticated fraud detection system, leveraging cutting edge machine learning algorithms to fortify financial security and instill trust in consumers and financial institutions alike. Central to the project's methodology is the meticulous duration and pre-processing of datasets, ensuring the integrity and suitability of the data for subsequent model training endeavors. Through the judicious application of diverse machine learning algorithms, including Logistic Regression, Naive Bayes, and Decision Trees, the project endeavors to engineer highly accurate and resilient models adept at discerning fraudulent transactions. These models are subjected to rigorous evaluation and comparison, with metrics such as accuracy, precision, recall, and F1 score meticulously analysed to ascertain the most efficacious algorithm for seamless integration with the frontend interface. By prioritizing the seamless fusion of accuracy, reliability, and real-time functionality, the project aims to furnish users with an indispensable tool for proactive transaction monitoring and fraud mitigation. In doing so, it seeks to not only curtail financial losses but also cultivate an environment of confidence and trust in digital credit card transactions.