VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELAGAVI

A PROJECT REPORT ON

"DEEP LEARNING BASED DRUG ABUSE DETECTION AND CLASSIFICATION USING IRIS SCANNING"

Submitted in partial fulfillment for the award of Degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE & ENGINEERING

By

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CERTIFICATE

This is to certify that the project entitled **"DEEP LEARNING BASED DRUG ABUSE DETECTION AND CLASSIFICATION USING IRIS SCANNING"** has been successfully completed by

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The Bonafede students of **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–24. 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.

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ABSTRACT

Drug abuse remains a persistent societal challenge, necessitating innovative approaches for timely detection and intervention. Conventional screening methods often suffer from compromised accuracy, efficiency, and privacy, highlighting the need for alternative solutions. This study focuses on leveraging iris image analysis and convolutional neural networks (CNNs) to detect drug addiction-induced physiological changes. The objective is to harness the predictive capabilities of CNNs to discern drug-induced alterations from ocular images.

Our approach encompasses preprocessing, data segmentation, CNN training, and performance evaluation, utilizing a meticulously curated dataset of drugged and non-drugged eye images obtained ethically and with stringent privacy measures. The primary aim is to develop a reliable system capable of distinguishing between drugged and non-drugged eyes based solely on iris images. By integrating cutting-edge technology with rigorous procedures, this project seeks to enhance drug misuse detection and intervention processes.

Detailed descriptions of preprocessing techniques, data segmentation strategies, CNN architecture design, model evaluation methodologies, and research implications are provided in subsequent sections. The overarching goal of this initiative is to make a substantial impact on combating drug misuse and its detrimental effects on society.