

AI/ML-Driven System for Detecting Deep-Fake-Face-Swap Images

A Summer Internship Report Submitted in the partial fulfillment of the requirements for the award of the degree of

**Bachelor of Technology
in
Computer Science and Engineering -
Artificial Intelligence and Machine Learning**

Submitted by

S.Sravya

(23075A6614)

Under the esteemed guidance of

Mrs. Preety Singh
Assistant Professor
CSE-AIML & IoT
VNRVJIET



**DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING-
ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING &
INTERNET OF THINGS**

**VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI
INSTITUTE OF ENGINEERING AND TECHNOLOGY**

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NBA Accredited for CE, EEE, ME, ECE, CSE, EIE, IT B. Tech Courses
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Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad – 500 090, TS, India,

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CERTIFICATE

This is to certify that the project work entitled “**AI/ML-Driven System for Detecting Deep-Fake-Face-Swap Images**” is being submitted by **S.Sravya(23075A6614)**, in partial fulfillment for the award of Degree of Bachelor of Technology in CSE-Artificial Intelligence and Machine Learning to the Jawaharlal Nehru Technological University, Hyderabad during the academic year **2024-25** is a record of bonafide work carried out under our guidance and supervision. The results embodied in this report have not been submitted by the students to any other University or Institution for the award of any degree or diploma.

Supervisor
Ms.Preety Singh
Assistant Professor
CSE -AIML & IoT VNRVJIET

Head of the Department
Dr. Sagar Yeruva
Associate Professor
CSE-AIML & IoT VNRVJIET

Signature of the External Examiner with date

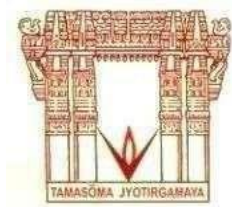
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DECLARATION

We hereby declare that the project entitled “**AI/ML-Driven System for Detecting Deep-Fake-Face-Swap Images**” submitted to VNR Vignana Jyothi Institute of Engineering and Technology in partial fulfillment of the requirement for the award of **Bachelor of Technology in CSE - Artificial Intelligence and Machine Learning** is a bonafide report of the work carried out by us under the guidance and supervision of Ms.Preety Singh, Assistant Professor, Department of CSE -Artificial Intelligence and Machine Learning & Internet of Thing, VNRVJIET.

To the best of my knowledge, this has not been submitted in any form to any university or institution for the Award of any degree or diploma.

S.Sravya
(23075A6614)

Place:

Date:

ACKNOWLEDGMENT

Behind every achievement lies an unfathomable sea of gratitude to those who activated it, without which it would never have come into existence. To them, we lay the words of gratitude imprinted within us.

We are indebted to our venerable principal **Dr. C. D. Naidu** and our Head of the Department **Dr. Sagar Yeruva**, for the support and encouragement given by them led us to complete this Summer Internship Project.

We express our thanks to our project guide Ms.Preety Singh and the Project Coordinator **Mr.Shaik Mabasha** for having provided us with a lot of facilities to undertake the project work and guide us to complete the Summer Internship project.

We express our sincere thanks to our faculty of the Department of CSE-Artificial Intelligence and Machine Learning & Internet of Things and the remaining members of our college **VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY** who extended their valuable support in helping us to complete the project in time.

1. S.Sravya (23075A6614)

ABSTRACT

The project's main goal is to create a forensic solution based on AI/ML that can identify deepfake photos that use face swapping. Deepfake technology has become a significant challenge due to the quick development of artificial intelligence, which makes it possible to produce incredibly realistic but misleading videos. These manipulated videos pose significant threats to digital security, misinformation propagation, and identity fraud. The proposed system will leverage advanced deep learning techniques: Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Generative Adversarial Networks (GANs). The system will accurately identify and flag deepfake content. The system will accurately identify and flag deepfake content. High-performance computing resources such as Google Colab and GPU/TPU acceleration will be used. The model will undergo rigorous training and evaluation using industry-standard frameworks: Keras, Scikit-learn. This solution aims to : Enhance digital media integrity, Support cybersecurity initiatives. Provide law enforcement agencies with an effective tool to combat deepfake threats.