PES UNIVERSITY

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100-ft Ring Road, Bengaluru – 560 085, Karnataka,India

Capstone Project Report (Phase 2)

On

Deep fake Image Detection Using GANception

Submitted by

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Under the guidance of

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FACULTY OF ENGINEERING
DEPARTMENT OF COMPUTER APPLICATIONS
PROGRAM – MASTER OF COMPUTER APPLICATIONS

CERTIFICATE

This is to certify that the project entitled

Deep Fake Image Detection Using GANception

is a bonafide work carried out by

in partial fulfillment for the completion of Capstone Project, Phase-1 work in the Program of Study MCA under rules and regulations of PES University, Bengaluru during the period Nov. 2024 – Feb 2025. The project report has been approved as it satisfies the academic requirements of 3rd semester MCA.

Internal Guide	**Chairperson**	**Dean- Faculty of Engineering & Technology**
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DECLARATION

I, **SHRINIVAS S PATIL,** bearing **PES1PG23CA137** hereby declare that the Capstone project phase-1 entitled, ***Deep Fake Image Detection Using GANception,*** is an original work done by me under the guidance of **SANTOSH S KATTI,** Designation, PES University, and is being submitted in partial fulfillment of the requirements for completion of 3rd Semester course in the Program of Study **MCA**. All corrections/suggestions indicated for internal assessment have been incorporated in the report.

PLACE: DATE:

SHRINIVAS S PATIL

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I express my sincere gratitude to the Vice Chancellor of PES University, **Dr. J Suryaprasad** and Chairperson **Dr. Veena S**, who gave me an opportunity to go ahead with this project.

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SHRINIVAS S PATIL

ABSTRACT

In its application, this will involve creating an advanced deep fake image detector via the deep neural network (DNNs). The system will force the use of complex machine learning algorithms, which will be excellent to detect real and manipulated images on different platforms, particularly when deep fakes present a high risk in social media.

The use of detection methods based on GAN is decisive because these methods examine intrinsic artifacts and contradictions that are typically contained in deep fake images. Some of these artifacts are abnormal textures, unnatural facial expression, consistency in lighting or shadowing. The capacity of the system to signal manipulated content is therefore mile high when such slight hints are picked.

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