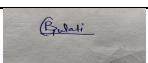


Title: - Detection of Face swap based Deep Fake Videos

Internal Inventor(s): -

Full Name	Bhawya Gulati
Mobile Number	7037443867
Email (personal)	Bhawygulati33@gmail.com
UID	12312608
Address of Internal Inventor	Lovely Professional University, Phagwara
Signature	

Full Name	Divyanshi Vats
Mobile Number	9350549002
Email (personal)	Divyanshvats1305@gmail.com
UID	12312842
Address of internal inventor	Lovely Professional University, Phagwara
Signature	

Description of Invention: -

Developed a Convolutional Neural Network (CNN) model trained on a dataset of real and face-swapped (deep fake) images to detect manipulated content. The model was trained for 20 epochs and evaluated using appropriate evaluation metrics to ensure reliable classification performance. A simple and user-friendly interface was created using HTML, CSS, and JavaScript, allowing users to upload an image and instantly receive a prediction on whether the face is real or fake. The entire application was deployed using Flask, enabling smooth backend–frontend integration and real-time inference.

Usefulness / Impact:

This project addresses the growing threat of deep fake media, which can lead to misinformation, identity misuse, and social manipulation. Automated deep fake detection tools like this can help law enforcement, media agencies, social platforms, and individuals verify the authenticity of digital content. The system provides a fast, accessible way to perform initial screening of suspicious images, thereby improving digital trust and safety.

Drawbacks / Limitations:

- Performance may vary depending on the complexity or quality of the input image.
- The model is trained on a limited dataset, so it may struggle with unseen deep fake generation techniques.
- Only image-based detection is supported; video detection is not included.
- Sophisticated deep fake methods may bypass basic CNN architectures, requiring more advanced or updated models.

