Jyothi Engineering College
NAAC Accredited College with NBA Accredited Programmes*
Approved by AICTE & affiliated to APJ Abdul Kalam Technological University
A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR
JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777
NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

Deep Fake Detection Using Machine Learning

Group no : 14

Department of CSE

Jyothi Engineering College

Thrissur

September 30, 2020

Group Members :

1. Karthik PC : JEC17CS061
2. M P Adithya Vijayan : JEC17CS069
3. Sanjana S : JEC17CS088
4. Thushara P : JEC17CS103

Guide : Ms. Aswathy Wilson

Vision of the Department

- Creating eminent and ethical leaders in the domain of Computational Sciences through quality professional education with a focus on holistic learning and excellence.

Mission of the Department

- To create technically competent and ethically conscious graduates in the field of Computer Science and Engineering by encouraging holistic learning and excellence.
- To prepare students for careers in Industry, Academia and the Government.
- To instill Entrepreneurial Orientation and research motivation among the students of the department.
- To emerge as a leader in education in the region by encouraging teaching, learning, industry and societal connect.

Contents

- Introduction
- Objective of the project
- Problem Statement
- Area of the project
- Skills set required for the project
- Seminar topics
- Conclusions

Introduction

- Deep Fake videos are AI generated videos that look real but are actually fake
- Smartphone and desktop applications like FaceApp and FakeApp are built upon this process
- Deep fake videos can have an adverse effect on a society
- These videos can challenge a person's integrity

Objectives

- Main objective of our project is to detect deep fake videos
- Our system provides a method to detect these fake videos and thereby preventing the usage of these videos in creating political distress, blackmailing, fake terrorism events, etc.

Problem Statement

- The amount of deep fake videos are increasing rapidly
- Now there is need to detect whether a video is manipulated or not
- Our project aims to segregate deep fake videos and real videos

Area of project

- Machine Learning
- Deep Learning

Skills set required for project

- Basic knowledge about machine learning, deep learning and programming skills
- Knowledge about creation of Deep Fakes

Conclusion

- In our project, we propose a method that can be used to decide whether a video is manipulated or not
- Our project aims to categorize videos as real or fake based on its features
- Detection of deep fake videos can make the internet a safer place for everyone

Seminar Topics

Name : Karthik PC

Topic : Deep fake and It's Detection Techniques

Abstract: Deep fake videos are AI-generated videos that look real but are actually fake. Deep fake videos are generally created by face-swapping techniques. It started out as fun but like any technology, it is being misused.So identifying and categorizing these videos has become a necessity. In this paper, we will deliberate about the different methods for detecting Deep Fake Videos

Name : Sanjana S
Topic : Classification of Real and Deep fake images

Abstract: With significant advancement in made in deep-learning technologies, today it became essential to detect deepfakes inorder to protect individuals from potential misuses. Existing methods requires both real and fake images for training. It is a challenging task due to data scarcity. Method proposed in this paper overcomes these data scarcity limitations.

Name : M P Adithya Vijayan

Topic : Classification of Deepfake using biological methods

Abstract: In this fast-growing world where millions of videos are taken and uploaded it still remains a challenge to identify whether the video is real or not.These fake videos are known as Deep Fakes. Biological signals are present in all humans.The method proposed in this paper is a deep fake source detection technique via interpreting residuals with biological signals.

Name : Thushara P
Topic : Classification of Deepfake using mouth features.

Abstract: In this growing world where everyone is using smartphone and video calls and uploading it in social media like Instagram, Facebook, snapchat etc. It is still a crisis to identify whether the video is Fake or not.In this paper,the CNN deep learning algorithm is used, which is done by comparing the mouth of the user.

Thank You