

DEEPPFAKE DETECTION

Our project addresses the rising threat of deepfake videos by developing a web application that automatically detects manipulated content. Using advanced machine learning and a pre-trained model, the app analyzes uploaded videos to determine authenticity, providing users with real-time feedback and confidence scores to combat misinformation.

VIDEO UPLOADER

Users upload videos to our system through a simple interface, making their videos available for analysis.

1

VIDEO PREPROCESSOR

The backend receives these uploaded videos, processes theThe Flask endpoint /Detect receives the video file. The video is saved to a temporary directory. Frames are extracted from the video, faces are detected and cropped, and the frames are preprocessed.m, and prepares them for the next steps in the detection process.

2

FACE DETECTOR

OpenCV is used to automatically find and locate faces within the uploaded videos. This step is crucial as it identifies the key areas where deepfake manipulation might occur.

3

DEEPPFAKE ANALYSER

This is the core of our project. We've trained a specialized model, likely using Convolutional Neural Networks (CNNs), to differentiate between real videos and those altered by deepfake technology. We trained this model on datasets specifically curated to include both real and manipulated videos.

4

RESULT PROCESSOR

Once the deepfake analyzer makes its determination, the results are processed to provide meaningful insights. This could involve calculating probabilities or generating detailed reports based on the analysis.

5

RESULT DISPLAYER

The final outcomes from our analysis are presented to users in a clear and understandable format. This ensures that users can easily see whether a video has been identified as a potential deepfake, helping them make informed decisions about the authenticity of the media they encounter.

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