DEEPFAKE DETECTION

Abstract:

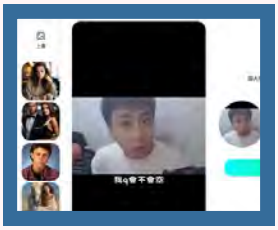
- This project built a model based on CNN to create a website that detects Deepfake images. Besides that, we also tested various face-swapped videos online for comparison and created a vector database to search for Deepfake-related news.

Objective :

- 1.DETECT HIGH-QUALITY DEEPFAKE IMAGES.
- 2.IMPROVE DETECTION ACCURACY.
- 3.OPTIMIZE THE WEBSITE INTERFACE.
- 4.STUDY CNN BASICS.

FACE-SWAP VIDEO GENERATOR:

faceswapper



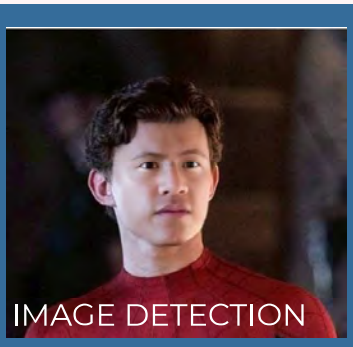
Pica

FaceSwapper: High face-swapping accuracy,but slower processing speed.

Pica: Provides multiple creative filters and effects, but the synthesis can sometimes appear unnatural.

Deepfake Detector:

Using a CNN model to detect images, users only need to upload the image they want to check. The system will then directly analyze and display whether the image is real or a deepfake.



Model prediction: The result is Deepfake.

Confidence Score: 62.91%. A higher score means a higher chance the image is a Deepfake.

DATABASE WEBSITE:

The news articles found through searches are uploaded to this website. Users need to log in and can have two roles: Viewer or Uploader. Uploaders can customize the titles and choose categories for their posts. Then, everyone can easily check out the news on the viewing page.