

FaceSwap AI App – Project Summary

Project Overview:

FaceSwap AI is a full-stack web application that enables users to seamlessly swap faces in both **images** and **videos** using advanced deep learning models. The system is built with **FastAPI (backend)** and **Streamlit (frontend)** and leverages **InsightFace ONNX models** for image-based swaps and the **MaxStudio API** for high-fidelity video face replacements.

Features Implemented:

- Image Face Swap using InsightFace (offline ONNX model)
 - Video Face Swap via MaxStudio (face detection → video processing)
 - Upload interface for both image and video
 - Asynchronous job handling and status polling
 - Final preview + video download options
 - Clean and responsive UI with real-time feedback
-

Live Deployment:

- <https://swap-face.streamlit.app/>

GitHub Repository:

- <https://github.com/Hari-Kec/FaceSwap>

Demo Video:

https://drive.google.com/file/d/1ufDAHqFsD01S1WfNzv2LVvBV_f6wpmWW/view?usp=drive_link

What I Learned:

- Working with ONNX-based facial recognition and swap models (InsightFace)
- Integrating third-party APIs like MaxStudio for asynchronous media processing
- Handling file uploads, job queues, and real-time updates in a full-stack setup
- Designing clean UI/UX using Streamlit for fast prototyping
- Debugging model download issues, dependency errors, and deploying production-level AI apps