

Face-swap experiments

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GPU Colab exploration of open source face-swap (deepfake) generation.

Problem

Wanted hands-on experience with the practical side of deepfake generation, GPU environment setup, model weight distribution, and pipeline orchestration, rather than the theory alone.

Approach

Set up `roop`, an open source face-swapping tool built on the `inswapper_128` ONNX model, in a GPU-backed Google Colab environment. This meant getting the PyTorch/CUDA/ONNX Runtime GPU versions to actually agree with each other, downloading the model weights from Hugging Face, and running the swap against a target video and source face image.

Result

Got the pipeline running end to end: face detection, swap, and video output. Attempted an additional face-enhancement pass for sharper results, that particular processor wasn't available in the environment at the time and didn't run.

What I'd do differently

Be honest about what this is: it's environment setup and orchestration around an existing model, not original model work. If I revisited this, I'd go further, either fine-tuning the underlying model on a specific use case or building proper input/output tooling around it, rather than stopping at "got the demo working."

Part of an ongoing series of applied AI and engineering projects. Full write-up and live links at theinternetengineer.com.