

OpenAI Whisper (Plan of Attack!)

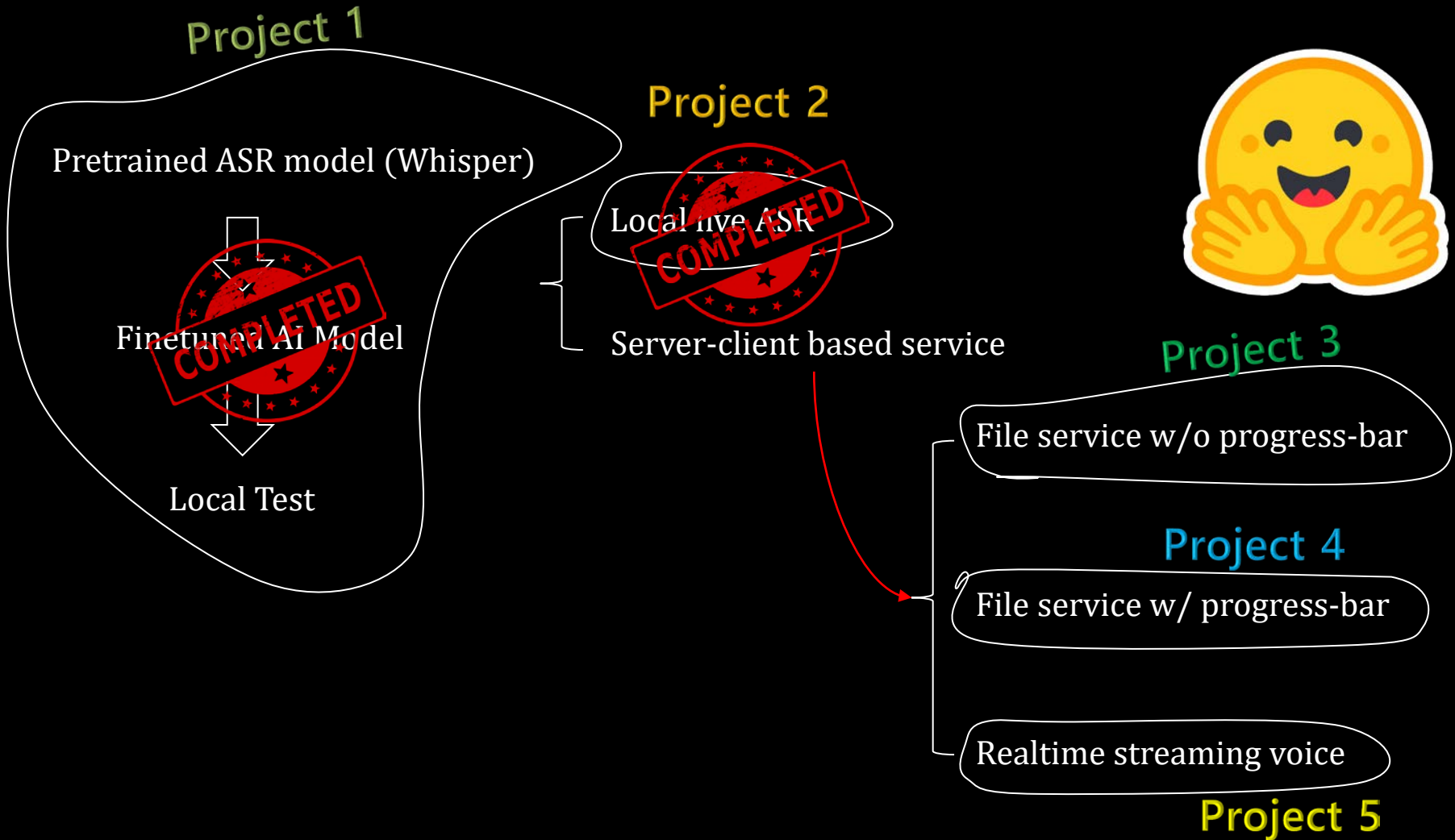
Client-server-based File ASR service

소프트웨어 끈대 강의

노기섭 교수

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Big Picture



Recap: Finetuning from Pretrained Models

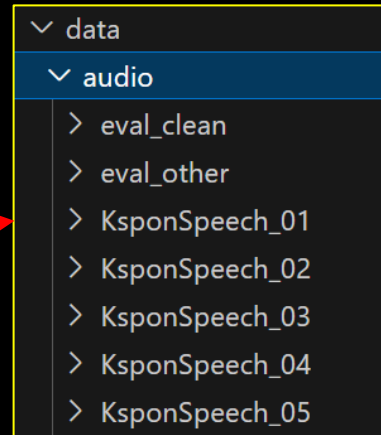
A few good memories...

멀고 험했던... $\pi\pi$

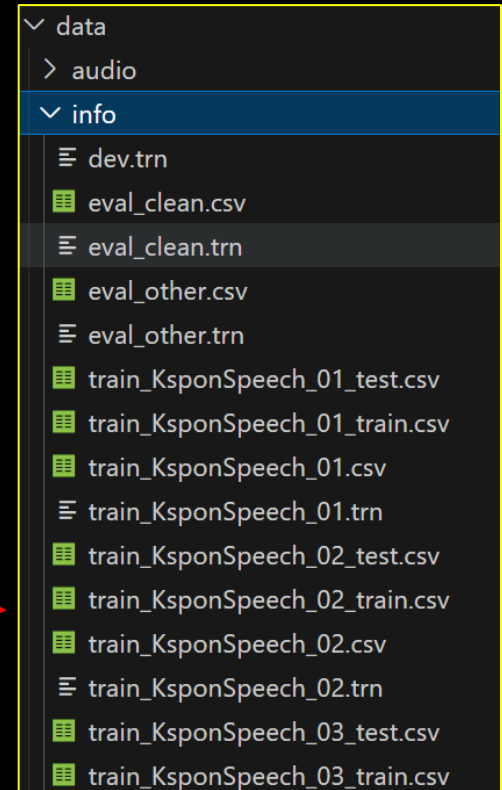
데이터 전처리 작업 $\pi\pi\pi\pi$

그 때 생각 나세요? ㅎ

음성파일
전처리



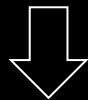
텍스트 파일
(Transcript)
전처리



Pretrained ASR model (Whisper)



AI Model



Local Test

그간의 Finetuning Summary

ACIN Academy

https://github.com/kafa46/acin_academy/tree/master

Whisper ASR Finetuning

https://github.com/kafa46/acin_academy/tree/master/202_fine_tuning

Download for Finetuned Models

https://github.com/kafa46/acin_academy/blob/master/202_fine_tuning/whisper/model_archive/readme_archive.md

Mini-project #2: Configurations

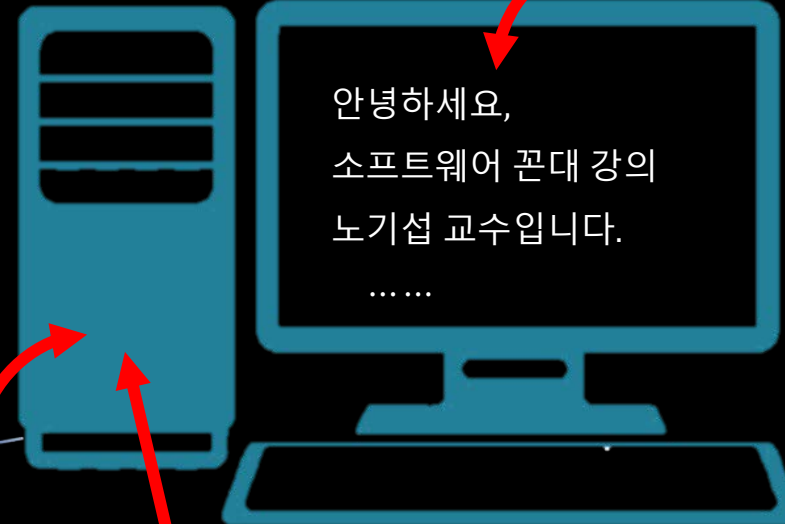
DONE!



Pretrained
ASR model



텍스트 출력
(간단한 코딩)



Hardware Selection
(Choose Microphone)

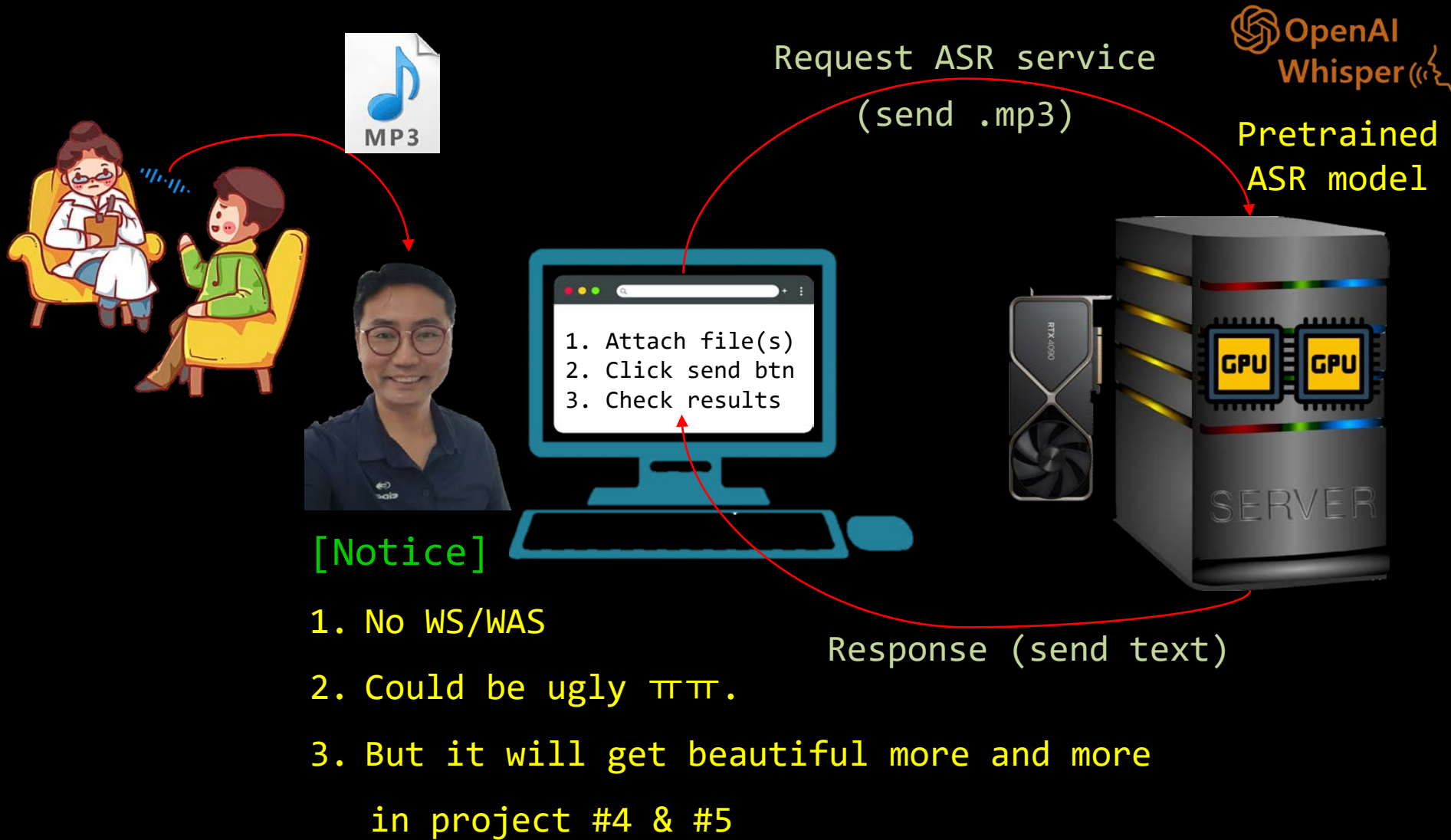
음성 검출 알고리즘 VAD
(Voice Activity Detection)

Project #2
강의 자료



https://github.com/kafa46/a_cin_academy/tree/master/201_deployment#local_live_asr

Mini-project #3: Scenario



Prerequisites

What you need before we start

- Local Computer (desktop, laptop, etc.)
 - I don't care the computing power.
- Linux server (lab, cloud, company, ...)
 - Recommend Ubuntu OS
 - However, it's up to you.



- Virtual environment for dev.
 - Same as Project # 1 & #2
- Dependencies
 - flask, werkzeug, flask_wtf, wtforms,
 - Maybe more (just-in-case)

Implementation Approach



Workspace Structure

work_dir/

FYI, 04_file_asr_no_socket in my case

ai_asr/

models/

whisper-small/

whisper-medium/

우리가 실습을 통해
AI-hub 데이터 학습 모델

inference.py (whisper 모델을 이용하여 추론 수행)

server/

static/

css/

files/

imgs/

js/

templates/

views/

[다운로드 링크]

https://github.com/kafa46/acin_academy/blob/master/202_fine_tunning/whisper/model_archive/readme_archive.md

config.py (플라스크 서버가 사용할 설정)

run_server.py (플라스크 서버 실행을 위한 파이썬 스크립트)

secret.py (서버에서 사용할 비밀번호 등 민감 정보를 보관)

export_env.sh (플라스크 환경 설정 값을 export 해주는 shell script)



수고하셨습니다 ..^^..