

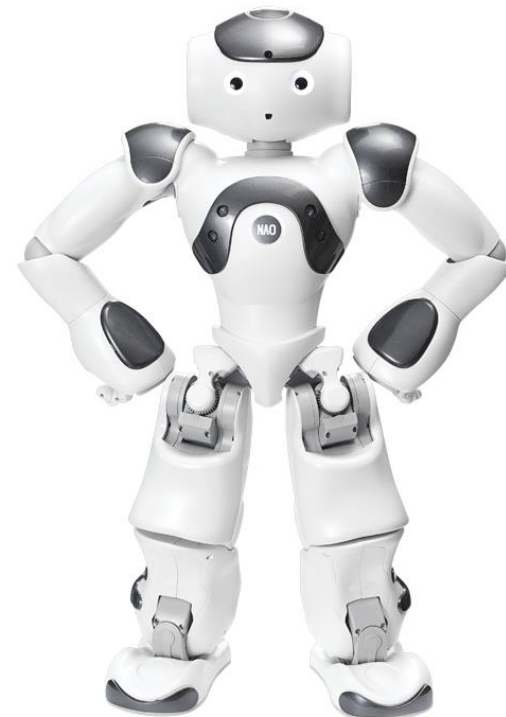


CS310 Project- Robot

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Objectives

- ▶ Now we have learnt different components of ASR and NLP, let's combine all the techniques to make a robot!



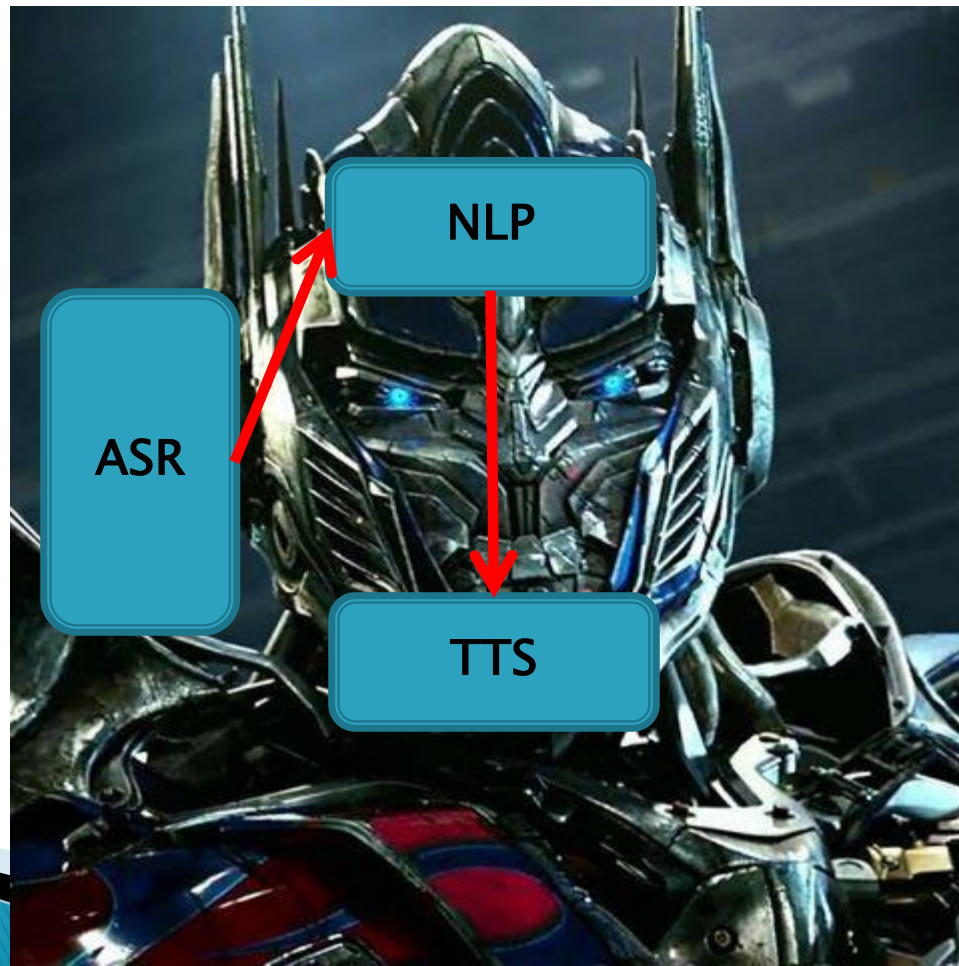
A robot head

- ▶ Luckily we just need to simulate the function of a robot head.

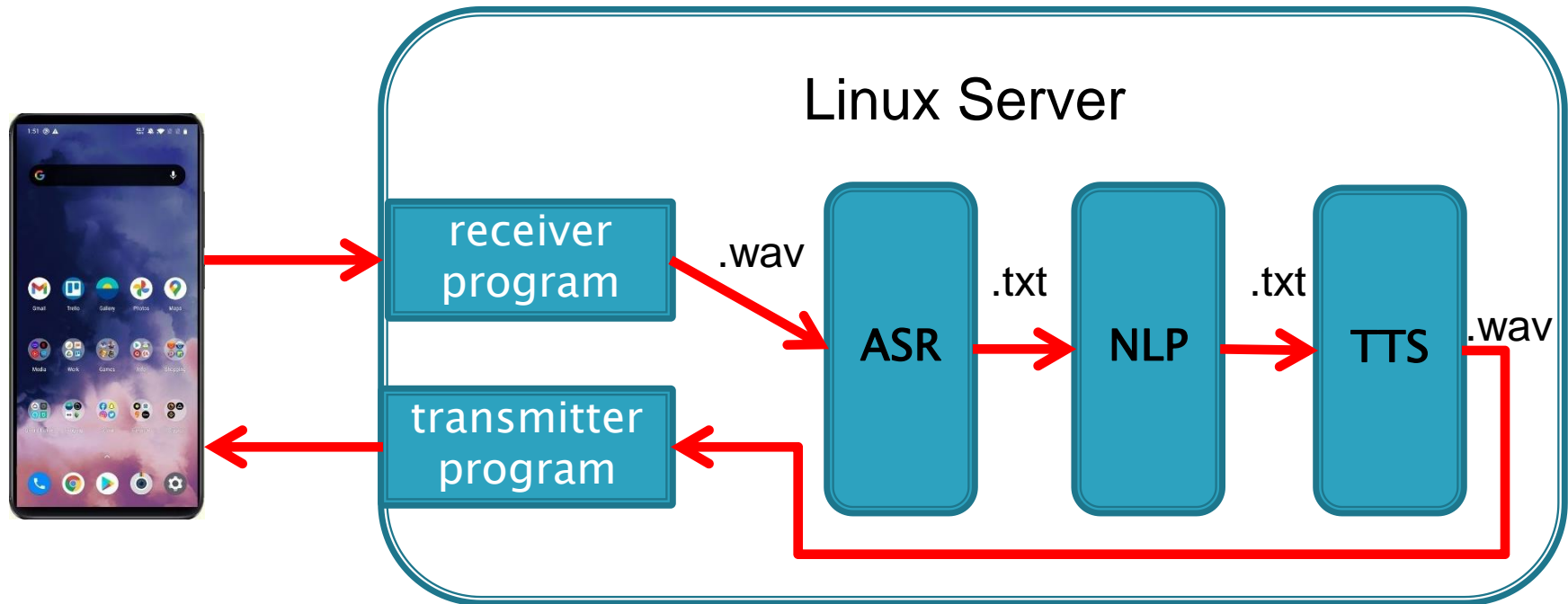


A robot head

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Implementation





The network component

- ▶ The receiver and transmitter programs are to simulate the online mode in real-world applications.
- ▶ Each of the receiver and transmitter carries 5% of the total score.
- ▶ If you don't want to implement them, we can still verify your system in an offline mode.



The offline mode

- ▶ In the offline mode, we will test your system with our pre-recorded audio file.
- ▶ Your project should provide an entry point:
`./run.sh`
- ▶ We will test your system with
 - `./run.sh ta001.wav output.wav`
 - `./run.sh ta002.wav output.wav`
 - `./run.sh ta003.wav`
- ▶ The running time for each run should be within 1 min.



The components in your system

- ▶ ASR
 - Kaldi
- ▶ NLP
 - Chatbot
- ▶ TTS
 - We will provide a Chinese TTS component for you.



Verifying your system

- ▶ We will verify your system with our prepared test cases.
- ▶ Each case contains at most 10 sentences.
- ▶ You should print the ASR result and the chatbot result on the screen, incase we are not satisfied with your final result, we can look at the intermediate result and give you partial marks.



A sample test case

- ▶ 早上好！
- ▶ 你怎称呼？
- ▶ 请多多指教！
- ▶ 你最近怎样？
- ▶ 你真的是人类吗？
- ▶ 你会讲笑话吗？
- ▶ 我今天好高兴。
- ▶ 你知道谁是美国总统吗？
- ▶ 你最常看哪本书？
- ▶ 里面的哪个角色最吸引你？



Demonstration

- ▶ We will verify your system on 21 / 5 and 22 / 5.
- ▶ You have to place all the necessary files in `/data/cs310/XXX/project/`, where XXX is your login name