

Research Interests

Large Multi-modal Language Model, Spoken Language Modeling, Automatic Speech Recognition

Education

National Taiwan University

PH.D STUDENT IN COMMUNICATION ENGINEERING

- Supervisor: Prof. Hung-yi Lee

Taipei, Taiwan

Feb. 2024 - Present

National Taiwan University of Science and Technology

M.S. IN COMPUTER SCIENCE AND INFORMATION ENGINEERING

- Supervisor: Prof. Kuan-Yu Chen

Taipei, Taiwan

Sep. 2020 - Feb. 2023

National Taiwan University of Science and Technology

B.S. IN COMPUTER SCIENCE AND INFORMATION ENGINEERING

Taipei, Taiwan

Sep. 2016 - Jun. 2020

Selected Publications

[1] DeSTA2.5-Audio: Toward General-Purpose Large Audio Language Model with Self-Generated Cross-Modal Alignment

Preprint

KE-HAN LU, ZHEHUAI CHEN, SZU-WEI FU, CHAO-HAN HUCK YANG, SUNG-FENG HUANG, CHIH-KAI YANG, CHEE-EN YU, CHUN-WEI CHEN, WEI-CHIH CHEN, CHIEN-YU HUANG, YI-CHENG LIN, YU-XIANG LIN, CHI-AN FU, CHUN-YI KUAN, WENZE REN, XUANJUN CHEN, WEI-PING HUANG, EN-PEI HU, TZU-QUAN LIN, YUAN-KUEI WU, KUAN-PO HUANG, HSIAO-YING HUANG, HUANG-CHENG CHOU, KAI-WEI CHANG, CHENG-HAN CHIANG, BORIS GINSBURG, YU-CHIANG FRANK WANG, HUNG-YI LEE

[2] Speech-IFEval: Evaluating Instruction-Following and Quantifying Catastrophic Forgetting in Speech-Aware Language Models

INTERSPEECH 2025

KE-HAN LU, CHUN-YI KUAN, HUNG-YI LEE

[3] Developing Instruction-Following Speech Language Model Without Speech Instruction-Tuning Data

ICASSP 2025

KE-HAN LU, ZHEHUAI CHEN, SZU-WEI FU, CHAO-HAN HUCK YANG, JAGADEESH BALAM, BORIS GINSBURG, YU-CHIANG FRANK WANG, HUNG-YI LEE

[4] DeSTA: Enhancing Speech Language Models through Descriptive Speech-Text Alignment

INTERSPEECH 2024

KE-HAN LU, KE-HAN LU, ZHEHUAI CHEN, SZU-WEI FU, HE HUANG, BORIS GINSBURG, YU-CHIANG FRANK WANG, HUNG-YI LEE

[5] A Context-aware Knowledge Transferring Strategy for CTC-based ASR

SLT 2022

KE-HAN LU, KUAN-YU CHEN

[6] Building a taiwanese mandarin spoken language model: A first attempt

Preprint

KE-HAN LU, CHIH-KAI YANG, YU-KUAN FU, CHEN-AN LI, YI-CHENG LIN, YU-XIANG LIN, WEI-CHIH CHEN, HO LAM CHUNG, CHUN-YI KUAN, WEI-PING HUANG, TZU-QUAN LIN, HSIU-HSIUAN WANG, EN-PEI HU, CHAN-JAN HSU, LIANG-HSIUAN TSENG, I CHIU, ULIN SANGA, XUANJUN CHEN, PO-CHUN HSU, SHU-WEN YANG, HUNG-YI LEE

[7] Dynamic-SUPERB: Towards A Dynamic, Collaborative, and Comprehensive Instruction-Tuning Benchmark for Speech

ICASSP 2024

CHIEN-YU HUANG, KE-HAN LU, SHIH-HENG WANG, CHI-YUAN HSIAO, CHUN-YI KUAN, HAIBIN WU, SIDDHANT ARORA, KAI-WEI CHANG, JIATONG SHI, YIFAN PENG, ROSHAN SHARMA, SHINJI WATANABE, BHIKSHA RAMAKRISHNAN, SHADY SHEHATA, HUNG-YI LEE

[8] Non-autoregressive ASR Modeling using Pre-trained Language Models for Chinese Speech Recognition

TASLP vol. 30, 2022

FU-HAO YU, KUAN-YU CHEN, KE-HAN LU

Industry Cooperation

NVIDIA

Dec. 2023 - Present

- Led the development of the DeSTA project, focusing on the design of the cross-modal alignment architecture and coordinating research efforts between NTU and NVIDIA.

Experience

Speech Processing and Machine Learning Laboratory at NTU.

Taipei, Taiwan

MANAGEMENT INFORMATION SYSTEM ENGINEER

Aug. 2024 - Feb. 2025

- Managed computing clusters in Speech Processing Lab.

Speech Processing and Machine Learning Laboratory at NTU.

Taipei, Taiwan

RESEARCH ASSISTANT

Jun. 2023 - Feb. 2024

Activities

Program Chair

- ROCling 2025

Reviewer

- ASRU 2025
- ACML 2025

Teaching Assistant

- **Introduction to Generative Artificial Intelligence** (Instructor: Prof. Hung-yi Lee)
- **Information retrieval** (Instructor: Prof. Kuan-Yu Chen)
- **Data structure** (Instructor: Prof. Kuan-Yu Chen)

Honors

- NVIDIA Academic Grant Program
- NSTC Graduate Research Fellowship(NSTC-GRF)
- 16th TaiwanTech Outstanding Youth Award