

# Chyi-Jiunn Lin

🌐 <https://eric102004.github.io/> ✉ [b08901060@ntu.edu.tw](mailto:b08901060@ntu.edu.tw)

## Research Interests

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Spoken Language Understanding, Question Answering, Information Retrieval, Speech Synthesis, Speech Processing, Natural Language Processing, Machine Learning

## Education

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**National Taiwan University (NTU)** *Sep. 2019 - Jun. 2023*  
BS in Electrical Engineering  
Overall GPA: 4.28 / 4.30      Major GPA: 4.28 / 4.30      Last 60 GPA: 4.30 / 4.30  
Rank: 1 / 189 (1%)

## Research Experiences

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**Speech Processing and Machine Learning Laboratory, NTU** *Aug. 2020 - Present*  
Undergraduate Research Assistant | Advisor: Hung-yi Lee, Lin-shan Lee

- Working on Spoken Question Answering (SQA) and Speech Retrieval with unpaired speech data. [1]
- Proposed SQA task in the spoken language understanding benchmark, SLUE. [2]
- Worked on Speaker-Adaptive Text-to-Speech Synthesis with meta learning algorithm. [4]

**Mediatek Research** *Jul. 2021 - Aug. 2021*  
Deep Learning Research Intern | Advisor: Da-shan Shiu

- Worked on Dense Passage Retrieval with hierarchical representations for open domain QA. [3]

## Publications

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[1] **SpeechDPR: End-to-End Spoken Passage Retrieval for Open-Domain Spoken Question Answering.** C.J.Lin, G.T.Lin, Y.S.Chuang, W.L.Wu, S.W.Li, A.Mohamed, H.Y.Lee, L.S.Lee. Accepted to IEEE ICASSP 2024

[2] **SLUE Phase-2: A Benchmark Suite of Diverse Spoken Language Understanding Tasks.** S.Shon, S.Arora\*, C.J.Lin\*, A.Pasad\*, F.Wu, R.Sharma, W.L.Wu, H.Y.Lee, K.Livescu, S.Watanabe. ACL 2023

[3] **Hierarchical Representations in Dense Passage Retrieval for Question-Answering.** P.Ennen, F.Freddi, C.J.Lin, P.N.Kung, R.C.Wang, C.Y.Yang, D.S.Shui, A.Bernacchia. FEVER workshop at EACL 2023

[4] **Meta-TTS: Meta-Learning for Few-Shot Speaker Adaptive Text-to-Speech.** S.F.Huang, C.J.Lin, D.R.Liu, Y.C.Chen, H.Y.Lee. IEEE/ACM TASLP

## Selected Project

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**SLUE Benchmark (Phase-2)** *Sep. 2022 - Present*

- Collaborated with researchers in ASAPP, TTIC, CMU and added the new Spoken QA task.
- Collected a new Spoken QA dataset, SLUE-SQA-5. The process included writing the research funding proposal, creating the data collection website, checking data quality.
- Programmed Spoken QA training and evaluation pipelines.

## Honors

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**NTU Presidential Award**, NTU (for top 2% students) 2022  
**Dean's List Award (5 times)**, NTU (for top 5% students) 2019-2022

### Competitions:

**1st Place**, NTUEE Undergraduate Innovation Award (out of 27 works) 2022  
**3rd Place**, Micron UV Robot Design Contest (out of 64 teams worldwide) 2020  
**STMicroelectronics Enterprise Award**, Meichu Hackathon 2020

### Scholarships:

The Memorial Scholarship Foundation to Lin Hsiung Chen (top 50 out of 1000+ candidates) 2022  
Hon Hai Scholarship 2021  
Scholarship of Pan Wen-Yuan Foundation (top 3 candidates in NTU) 2020

## Teaching and Service

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**Teaching Assistant**, NTU 2021-2022  
Machine Learning, Signals and Systems, Introduction to Digital Speech Processing  
**Reviewer**, ISCSLP 2022, IALP 2023, Neural Networks 2022 - Present

## Activities and Leadership

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**Vice-Captain**, NTUEE Tennis Team *Sep. 2020 - Jun. 2021*  
Scheduled training, friendly match, interschool competition and managed training equipment.  
**Senior Member**, Taiwan Japan Student Conference *Sep. 2019 - Present*  
Held cultural and academic exchange activities between Taiwanese and Japanese students regularly.  
**Project Leader**, in course projects of Introduction to Digital Speech Processing, Electrical Engineering Lab (photonics), Computer Programming. *Sep. 2019 - Jun. 2023*

## Skills

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### Programming Languages and Frameworks

Python, MATLAB, C/C++, Shell, Pytorch, Transformers, Fairseq, Kaldi, S3PRL

### Languages

Mandarin (native), English (proficient), Japanese (proficient)