

# Chao-Wei Huang

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**EDUCATION**      **National Taiwan University**      2018/09 - present  
Ph.D. , Computer Science and Information Engineering (CSIE) (expected Aug. 2024)  
Advisor: Yun-Nung (Vivian) Chen

**National Taiwan University**      2014/09 - 2018/06  
B. S., Computer Science and Information Engineering (CSIE)      GPA: 3.96/4.3

**RESEARCH INTERESTS**

- Natural Language Processing (NLP)
- Language Model Factuality
- Speech Translation
- Open-domain Retrieval

**SELECTED PUBLICATIONS**

- [1] [Chao-Wei Huang](#), Yun-Nung Chen. FactAlign: Long-form Factuality Alignment of Large Language Models. [\[Preprint\]](#)
- [2] [Chao-Wei Huang](#), Hui Lu, Hongyu Gong, Hirofumi Inaguma, Iliia Kulikov, Ruslan Mavlyutov, Sravya Popuri. Investigating Decoder-only Large Language Models for Speech-to-text Translation. In *Proc. of INTERSPEECH 2024 (Interspeech 2024)*, Kos Island, Greece, September 1-5, 2024. [\[Paper\]](#)
- [3] [Chao-Wei Huang](#), Tsu-Yuan Hsu, Chen-An Li, Chen-Yu Hsu, Yun-Nung Chen. Unsupervised Multilingual Dense Retrieval via Generative Pseudo Labeling. In *Proceedings of the 18th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2024)*, Malta, March 17-22, 2024. [\[Code\]](#) [\[Paper\]](#)
- [4] [Chao-Wei Huang](#), Chen-Yu Hsu, Tsu-Yuan Hsu, Chen-An Li, Yun-Nung Chen. CONVERSER: Few-Shot Conversational Dense Retrieval with Synthetic Data Generation. In *Proceedings of the 24th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2023)*, Prague, Czechia, September 11-15, 2023. [\[Code\]](#) [\[Paper\]](#)
- [5] Tsu-Yuan Hsu\*, Chen-An Li\*, [Chao-Wei Huang](#), and Yun-Nung Chen. Visually-Enhanced Phrase Understanding. In *Proceedings of The 61st Annual Meeting of the Association for Computational Linguistics (ACL 2023)*, Toronto, Canada, July 9-14, 2023. [\[Paper\]](#)
- [6] [Chao-Wei Huang\\*](#), Shang-Chi Tsai\*, and Yun-Nung Chen. Modeling Diagnostic Label Correlation for Automatic ICD Coding. In *Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL 2021)*, Online, June 6-11, 2021. [\[Code\]](#) [\[Paper\]](#)
- [7] [Chao-Wei Huang](#) and Yun-Nung Chen. Learning Spoken Language Representations with Neural Lattice Language Modeling. In *Proceedings of The 58th Annual Meeting of the Association for Computational Linguistics (ACL 2020)*, Seattle, USA, July 5-10, 2020. [\[Code\]](#) [\[Paper\]](#) [\[Slides\]](#)
- [8] Shang-Yu Su, [Chao-Wei Huang](#), and Yun-Nung Chen. Towards Unsupervised Language Understanding and Generation by Joint Dual Learning. In *Proceedings of The 58th Annual Meeting of the Association for Computational Linguistics (ACL 2020)*, Seattle, USA, July 5-10, 2020. [\[Code\]](#) [\[Paper\]](#)

- [9] Chao-Wei Huang and Yun-Nung Chen. Learning ASR-Robust Contextualized Embeddings for Spoken Language Understanding. In *Proceedings of 2020 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2020)*, Barcelona, Spain, 2020. [Code] [Paper] [Slides] [Presentation]
- [10] Chao-Wei Huang and Yun-Nung Chen. Adapting Pretrained Transformer to Lattices for Spoken Language Understanding. In *Proceedings of 2019 IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU 2019)*, Sentosa, Singapore, December 14-18, 2019. [Code] [Paper]

## WORKING EXPERIENCES

### Meta

*Research Scientist Intern, FAIR* 2023/07 - 2023/11  
 Research on leveraging large language models to end-to-end speech translation. We examined architectural designs and fine-tuning techniques and achieved SOTA performance on speech-to-text translation.

*Research Intern (AI)* 2022/09 - 2023/01  
 Research on evaluating and improving translation accuracy of named entities. We found that nearest neighbor methods improve named entity translation quality.

### Amazon

*Applied Science Intern, AlexaAI* 2021/07 - 2021/10  
 Research on transfer learning of dialogue state tracking with locale differences and ASR robustness.

*Applied Science Intern, AlexaAI* 2020/03 - 2020/06  
 Organization of DSTC9 track 1, focusing on knowledge selection and knowledge-grounded response generation in dialogue systems.

### Taiwan AI Labs

*Software Engineering Intern, Speech Recognition and Synthesis Group* 2017/07 - 2019/12  
 Developed an ASR system that serves as backbone of several products (e.g., Yating Transcriber, Yating Input Method, Yating Pianist). The ASR-assisted products have over two hundred thousand installations.

### National Taiwan University

*Teaching Assistant*  
 CSIE5431 Applied Deep Learning (2019 Spring, 2020 Spring, 2021 Spring, 2022 Spring, 2023 Fall)

## HONORS & AWARDS

**1<sup>st</sup> Place, Formosa Grand Challenge - Talking to AI** 2019/03  
 The Formosa Grand Challenge (FGC) is a challenge held by the Ministry of Science and Technology. The participants are required to develop a spoken question answering system that is capable of answering questions in spoken content. We won the 1<sup>st</sup> place overall among over 100 teams.

## TECHNICAL SKILLS

Python, C++, PyTorch, TensorFlow, Keras

## LANGUAGES

**Mandarin** (native)

**English** (proficient)