

Chao-Wei Huang

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 [Google Scholar](#)
 [Homepage](#)

EDUCATION

National Taiwan University 2018/09 - 2024/08
Ph.D. , Computer Science and Information Engineering (CSIE)
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
- Open-domain Retrieval
- Speech Translation

SELECTED PUBLICATIONS

- [1] Chao-Wei Huang, Yun-Nung Chen. FactAlign: Long-form Factuality Alignment of Large Language Models. In *Proceedings of The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP 2024)*, Miami, USA, November 12–16, 2024. (to appear) [\[Preprint\]](#)
- [2] Chao-Wei Huang, Yun-Nung Chen. PairDistill: Pairwise Relevance Distillation for Dense Retrieval. In *Proceedings of The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP 2024)*, Miami, USA, November 12–16, 2024. (to appear) [\[Preprint\]](#)
- [3] Chao-Wei Huang, Hui Lu, Hongyu Gong, Hirofumi Inaguma, Ilia 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. [\[Paper\]](#)
- [4] 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. [\[Code\]](#) [\[Paper\]](#)
- [5] 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. [\[Code\]](#) [\[Paper\]](#)
- [6] 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. [\[Paper\]](#)
- [7] 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. [\[Code\]](#) [\[Paper\]](#)
- [8] 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. [\[Code\]](#) [\[Paper\]](#) [\[Slides\]](#)

- [9] 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. [\[Code\]](#) [\[Paper\]](#)
- [10] 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. [\[Code\]](#) [\[Paper\]](#) [\[Slides\]](#) [\[Presentation\]](#)
- [11] 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

2017/07 - 2019/12

Software Engineering Intern, Speech Recognition and Synthesis Group

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

1st 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 1st place overall among over 100 teams.

TECHNICAL SKILLS

Python, C++, PyTorch, TensorFlow, Keras

LANGUAGES

Mandarin (native)

English (proficient)