

ZEYU ZHAO

[Google Scholar](#) [LinkedIn](#) [Personal Website](#)

Informatics Forum, 10 Crichton Street, Edinburgh, EH8 9AB, Scotland

zeyu.zhao@ed.ac.uk

EDUCATION

University of Edinburgh

September 2020 - Present

PhD Student, supervised by [Prof Peter Bell](#)

End-to-End Speech Recognition

[Centre for Speech Technology Research](#)

School of Informatics

Tsinghua University

September 2017 - August 2020

Master of Science, supervised by [Dr Wei-Qiang Zhang](#)

End-to-End Keyword Search and Speech Recognition for Low Resource Languages

[Speech and Audio Technology Lab](#)

Department of Electronic Engineering

CGPA: 3.6/4.0

Lady Margaret Hall, University of Oxford

August 2019

Summer Programme, Science Research at the Cutting Edge

Successfully completed with distinction

Beijing Institute of Technology

September 2013 - June 2017

Bachelor of Science

Department of Electronic Engineering

CGPA: 90/100

RESEARCH INTERESTS

Automatic Speech Recognition (ASR), Conversational AI, Generative AI

PUBLICATIONS

Conferences

Z. Zhao and P. Bell, “Regarding the Existence of the Internal Language Model in CTC-Based E2E ASR” ICASSP 2025 (accepted)

Z. Zhao and P. Bell, “Advancing CTC Models For Better Speech Alignment: A Topological Approach” IEEE Spoken Language Technology (SLT) Workshop 2024 (accepted)

Z. Zhao, P. Chen, and P. Bell, “Regarding Topology and Adaptability in Differentiable WFST-based E2E ASR” XAI-SA Workshop ICASSP 2024 (accepted)

Z. Zhao, P. Bell, and O. Klejch, “Exploring Dominant Paths in CTC-Like ASR Models: Unraveling The Effectiveness of Viterbi Decoding” XAI-SA Workshop ICASSP 2024 (accepted)

Z. Zhao and P. Bell, “Regarding Topology and Variant Frame Rates for Differentiable WFST-based End-to-End ASR” INTERSPEECH 2023 (pp. 4903-4907)

Y. Li[†], **Z. Zhao**[†], O. Klejch, P. Bell, and C. Lai, “A Word-Level Investigation of the Mutual Impact of Speech and Emotion Recognition” INTERSPEECH 2023 (pp. 1449-1453)

Z. Zhao and P. Bell, “Investigating Sequence-Level Normalisation For CTC-Like End-to-End ASR” IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2022 (pp. 7792-7796)

Z. Zhao and W. Q. Zhang, “End-to-End Keyword Search Based on Attention and Energy Scorer for Low Resource Languages” INTERSPEECH 2020 (pp. 2587-2591)

Z. Zhao, W. Q. Zhang, J. Liu, F. Zhang, X. Li, and L. Yu, “Jujubecake: An Extension of LSTM Considering Correlation among Input Blocks” 2020 15th IEEE International Conference on Signal Processing (ICSP) (Vol. 1, pp. 316-320)

Journals

Z. Zhao and W. Q. Zhang, “End-to-End Keyword Search System Based on Attention Mechanism and Energy Scorer for Low Resource Languages” Neural Networks, 2021, 139, 326-334

Z. Zhao, W. Q. Zhang, and J. Liu, “End-to-End Keyword Search System Based on Attention Mechanism and Multitask Learning,” (in Chinese) Journal of Signal Processing, 2020, 36(6):839-851. DOI: 10.16798/j.issn. 10030530. Jun 2020.

EXPERIENCE

Research Officer Generative and Interactive AI School of Mathematics and Computer Science, Swansea University	<i>September 2024 - Present</i>
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Research Associate (part-time) Fine-tuning and evaluating Large Language Models (LLMs) for finance application Main contributor and code writer University of Edinburgh	<i>March 2024 - August 2024</i>
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SpeechBrain k2 integration Make the new version of SpeechBrain support k2 training and decoding Main contributor Please refer to this pull request and this pull request for more information.	<i>August 2023 - December 2024</i>
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Automatic Speech Recognition (ASR) 2023-24 Held by Prof Peter Bell Teaching Assistant and Demonstrator University of Edinburgh	<i>January 2024 - June 2024</i>
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Automatic Speech Recognition (ASR) 2022-23 Held by Prof Peter Bell Teaching Assistant and Demonstrator University of Edinburgh	<i>January 2023 - June 2023</i>
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Machine Learning 2022-23	<i>September 2022 - January 2023</i>
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[†]Equal contribution.

Held by Dr Hao Tang
Marker
University of Edinburgh

Automatic Speech Recognition (ASR) 2021-22

January 2022 - June 2022

Held by Prof Peter Bell
Teaching Assistant and Demonstrator
University of Edinburgh

AWARDS & SCHOLARSHIPS

Student Research Award

2019

Research Center for Media Big Data Cognitive Computing, Department of Electronic Engineering
Tsinghua University, Beijing, China

National Scholarship

2014 - 2016

Beijing Institute of Technology, Beijing, China
For top students only

First Undergraduate Scholarship

2013 - 2017

Beijing Institute of Technology, Beijing, China
For top students only

Third Prize, Beijing Electronic Design Competition

2016

Honorable Mentioned, Mathematical Contest in Modelling

2015

First Prize in National Physics Competition

2014