

ZEYU ZHAO

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

zeyu.zhao@ed.ac.uk

EDUCATION

University of Edinburgh

September 2020 - Present

PhD Student

Centre for Speech Technology Research

School of Informatics

Tsinghua University

September 2017 - August 2020

M.S. in Information and Communication Engineering

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

B.S. in Electronic Information Engineering

Department of Electronic Engineering

CGPA: 90/100

PUBLICATIONS

Conferences

Z. Zhao and P. Bell, "Regarding Topology and Variant Frame Rates for Differentiable WFST-based End-to-End ASR" INTERSPEECH 2023 (accepted)

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 (accepted)

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

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

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

Journals

Z. Zhao and W. Q. Zhang. (2021). End-to-end keyword search system based on attention mechanism and energy scorer for low resource languages. Neural Networks, 139, 326-334.

Zhao Zeyu, Zhang Weiqiang, and Liu Jia, "End-to-End Keyword Search System Based on Attention Mechanism and Multitask Learning," (in Chinese) Journal of Signal Processing, 2020, 36(6):839-851.

^{††}Equal contribution.

EXPERIENCE

PhD Research at CSTR

September 2020 - Present

Supervised by Dr. Peter Bell

Focusing on End-to-End Automatic Speech Recognition

Automatic Speech Recognition (ASR) 2021-22

January 2022 - June 2022

Teaching assistant and demonstrator

Master Research at Tsinghua University

September 2017 - August 2020

Master Student, Department of Electronic Engineering

Supervised by Dr. Wei-Qiang Zhang

Automatic Speech Recognition (ASR), Keyword Search (KWS) and Sequence Modelling

Mainly focused on end-to-end ASR and KWS for low resource languages

OpenSAT19 Competition

April 2019 - August 2019

Core Member

Introduction: OpenSAT19 hosted by NIST is a competition which consists of three parts, including ASR, KWS and SAD (Speech Activity Detection). Each part contains 3 tasks so there are tasks in total. We attended 5 tasks, three in SAD, one in KWS and one in ASR.

Contribution: I was a core member of our team and developed KWS systems for Pashto language, a low resource language.

Result: We won two 1st prizes, two 2nd prizes and one 3rd prize. Particularly, we won the 2nd prize in KWS task, where I was the main contributor.

SKILLS

Python, PyTorch, ESPnet, Kaldi, C, \LaTeX , TensorFlow, Keras

LANGUAGES

Mandarin

Native speaker

English

Working proficiency

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	<i>2016</i>
Honorable Mentioned, Mathematical Contest in Modelling	<i>2015</i>
First Prize in National Physics Competition	<i>2014</i>

ACTIVITY

Escort *September 2013 - June 2015*

Member

Voluntary teaching for students of year 5 in Minren Primary School, Fangshan District, Beijing
Held a Christmas party in Beijing Institute of Technology in Fangshan District for the children in Minren Primary School.

Singing competition of the school of information and electronics *December 2013*

Beijing Institute of Technology
Entered the final competition.

Student Union of School of Information and Electronics *September 2014 - June 2015*

Core member and the minister of study and research

Beijing Institute of Technology