ZEYU ZHAO

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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[†1], **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, "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

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[1][†]Equal contribution.

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

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

Automatic Speech Recognition (ASR) 2022-23
January 2023 - June 2023

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.

RESEARCH INTERESTS

Automatic Speech Recognition (ASR), End-to-End ASR

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 *2016*

Honorable Mentioned, Mathematical Contest in Modelling *2015*

First Prize in National Physics Competition *2014*