

Xuan Zhang

CONTACT INFORMATION

Email: xuanzhang@jhu.edu
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Github: <https://github.com/Estelle/>

RESEARCH INTEREST

Natural language processing (with a particular interest in machine translation), machine learning (AutoML), multimodal in vision and language (sign language understanding)

EDUCATION

Johns Hopkins University (JHU) Baltimore, Maryland, USA
Ph.D. Computer Science Sep. 2019 - Aug. 2024
Advisor: Kevin Duh
Thesis: Hyperparameter Optimization for Neural Machine Translation Systems

Johns Hopkins University Baltimore, Maryland, USA
M.S. Computer Science Sep. 2016 - May. 2018

University of Electronic Science and Technology of China (UESTC) Chengdu, China
B.S. Information Security (Rank 1 out of 166) Sep. 2012 - Jun. 2016

EXPERIENCE

Meta Reality Labs Burlingame, CA, USA
Research Scientist Oct. 2024 -
Supervisor: Yue Liu, Christopher Brossman

- Working on developing the AI assistant for Ray-Ban Meta smart glasses.

Microsoft Research Asia Beijing, China
Research Intern March. 2022 - Oct. 2022
Advisor: Fangyun Wei, Yu Wu

- Worked on unsupervised sign language representation learning and sign language translation.

Microsoft Research Redmond, WA, USA
Research Intern June. 2020 - Aug. 2020
Advisor: Xiaodong Liu, Hoifung Poon, Hao Zhu

- Worked on knowledge-base-based language model pre-training.

Center for Language and Speech Processing, JHU Baltimore, MD, USA
Research Assistant Jan. 2018 - Aug. 2019
Advisor: Kevin Duh

- Worked on hyper-parameter optimization for neural machine translation models.
- Worked on curriculum learning for neural machine translation and domain adaption (co-advised by Marine Carpuat, University of Maryland).

HONORS AND AWARDS

[2023-2024 JHU+Amazon AI2AI fellowship](#) 2023
Outstanding Graduate of Sichuan Province 2016
National Scholarship (Top 1 out of 166) 2013, 2014
Tang Lixin Scholarship (Top 1 out of 551) 2013
CS Outstanding Student Award (Top 1 out of 166) 2013

- BOOK CHAPTERS **Xuan Zhang**, Kevin Duh. [Sign Language Gloss Translation](#)
In *A. Way, L. Leeson, D. Shterionov & C. Rathmann (Eds.), Sign Language Machine Translation. Springer. 2023*
- PUBLICATIONS **Xuan Zhang**, Kevin Duh. [Handshape-Aware Sign Language Recognition: Extended Datasets and Exploration of Handshape-Inclusive Methods](#)
Proc. of EMNLP 2023, Singapore
- Xuan Zhang**, Navid Rajabi, Kevin Duh, Philipp Koehn. [Machine Translation with Large Language Models: Prompting, Few-shot Learning, and Fine-tuning with QLoRA](#)
Proc. of WMT 2023, Singapore
- Xuan Zhang**, Kevin Duh, Paul McNamee. [A Hyperparameter Optimization Toolkit for Neural Machine Translation Research](#)
Proc. of ACL 2023, Toronto, Canada
- Xuan Zhang**,* Kiron Deb,* Kevin Duh. [Post-Hoc Interpretation of Transformer Hyperparameters with Explainable Boosting Machines](#)
Proc. of BlackboxNLP@EMNLP 2022
- Xuan Zhang**, Kevin Duh. [Approaching Sign Language Gloss Translation as a Low-Resource Machine Translation Task](#)
Proc. of AT4SSL@MTSummit 2021
- Xuan Zhang**, Kevin Duh. [Reproducible and Efficient Benchmarks for Hyperparameter Optimization of Neural Machine Translation Systems.](#)
TACL, Vol. 8, 2020
- Jason Naradowsky, **Xuan Zhang**, Kevin Duh. [Machine Translation System Selection from Bandit Feedback.](#)
Proc. of AMTA 2020
- Xuan Zhang**,* Brian Thompson,* Rebecca Knowles,* Huda Khayrallah, Kevin Duh, Philipp Koehn. [HABLex: Human Annotated Bilingual Lexicons for Experiments in Machine Translation.](#)
Proc. of EMNLP-IJCNLP 2019, Hong Kong, China.
- Xuan Zhang**, Pamela Shapiro, Gaurav Kumar, Paul McNamee, Marine Carpuat, Kevin Duh. [Curriculum Learning for Domain Adaptation in Neural Machine Translation](#)
Proc. of NAACL-HLT 2019, Minneapolis, Minnesota.
- Xuan Zhang**, Gaurav Kumar, Huda Khayrallah, Kenton Murray, Jeremy Gwinnup, Marianna Martindale, Paul McNamee, Kevin Duh and Marine Carpuat. [An Empirical Exploration of Curriculum Learning for Neural Machine Translation](#)
arXiv preprint 2018
- Hirofumi Inaguma, **Xuan Zhang**, Zhiqi Wang, Adithya Renduchintala, Shinji Watanabe, Kevin Duh. [The JHU/KyotoU Speech Translation System for IWSLT 2018](#)
Proc. of IWSLT 2018, Bruges, Belgium.
- TALKS **Tutorial**
Kevin Duh, **Xuan Zhang**. [AutoML for Natural Language Processing.](#)
EACL 2023, Dubrovnik, Croatia.
Kevin Duh, **Xuan Zhang**. [AutoML for Neural Machine Translation.](#)

AMTA 2022, Orlando, Florida.

PROFESSIONAL
SERVICE

CLSP Student Seminar Committee
Organized and scheduled weekly student seminars.

2019-2024

Reviewer:

Computational Linguistics

2023

ACL Rolling Review

2022

EMNLP, AACL-IJCNLP, WMT, AACL

2020

EMNLP, WMT

2019

Teaching Assistant:

Machine Learning (CS 475/675), JHU

2022

Course Assistant:

Machine Learning (CS 475/675), JHU

2018