

## Overall Performance

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- 5-year work experience of NLP engineering.
- 5-year NLP research on machine translation, language modeling, multilingual training and ML for NLP.
- 8-year experience of implementing ML and NLP projects with TensorFlow and Python.
- <https://orcid.org/0000-0002-4241-3837>

## Education

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### Northumbria University

Newcastle, UK

BSc, COMPUTER SCIENCE

Sep. 2008 - Jul. 2012

### University of Edinburgh

Edinburgh, UK

MSc, COMPUTER SCIENCE

Sep. 2012 - Dec. 2013

### Chongqing University

Chongqing, China

Ph.D, COMPUTER SCIENCE

Sep. 2018 - Sep. 2023

## Research Field

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- 1 Language Modeling
- 2 Multilingual Training
- 3 Machine Translation
- 4 Cross-lingual Transfer
- 5 ML for NLP

## Award

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|------|---|------------------------|
| 2023 | <b>Outstanding Reviewer</b> , ACL 2023  | <i>Reviewer</i>        |
| 2019 | <b>2nd Award</b> , National AI Challenger 2019, Chinese Academy of Science                | <i>Team Supervisor</i> |
| 2019 | <b>2nd Award</b> , National Conference of Student on Innovation and Entrepreneurship 2019 | <i>Team Supervisor</i> |
| 2018 | <b>Scholarship</b> , Fully funded Ph.D  | <i>Ph.D</i>            |

## Publication

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- 1 Ai, X., & Fang, B., "On-the-fly Cross-lingual Masking in Multilingual Training", ACL 2023, [link](#)
- 2 Ai, X., & Fang, B., "Multilingual Training with Globe Concurrence Information", Findings of ACL 2023, [link](#)
- 3 Ai, X., & Fang, B., "Leverage Relaxed Equilibrium for Sequence Modeling", ACL 2022, [link](#)
- 4 Ai, X., & Fang, B., "Vocabulary-informed Language Encoding", COLING 2022, [link](#)
- 5 Ai, X., & Fang, B., "Almost Free Semantic Draft for Neural Machine Translation", NAACL 2021, [link](#)
- 6 Ai, X., & Fang, B., "Empirical Regularization for Synthetic Sentence Pairs in Unsupervised Neural Machine Translation", AAAI 2021, [link](#)
- 7 Ai, X., & Fang, B., "Cross-modal Language Modeling in Multi-motion-informed Context for Lip Reading", IEEE/ACM Transactions on Audio, Speech and Language Processing, [link](#)

## Work Experience

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### Travel Sky

Chongqing

DATA ENGINEER

02 2014 - 04 2015

- I was responsible to extract a wide range of information from users' feedback and system logs.

### SPIC AI lab

Chongqing

NLP ENGINEER

09 2015 - 08 2018

- I led a team (most of them are interns) to develop our algorithms (e.g., QA algorithms) for an online chatbot.

## Committees

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**Conference Reviewer** NAACL; ACL; ACL ARR; EMNLP (both main and industry track); AAAI

**Journal Reviewer** Knowledge-based Systems

## Teaching and Tutoring

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**High school Level** Math teacher (2 month volunteer) in Cambodia.

**Undergraduate Level** Tutor for NLP basics. I contributed to preparing and teaching all the materials.

**Undergraduate Level** Tutor for machine learning. I contributed to preparing and teaching all the materials.

**Undergraduate Level** Team supervisor for national competitions. I supervised two teams for national competitions.

**Postgraduate Level** Supervisor for publications. I supervised two teams in Language + X research (e.g., language + vision). A recent publication: ICIP 2023, "A GLOBAL-LOCAL CONTRASTIVE LEARNING FRAMEWORK FOR VIDEO CAPTIONING"

**Postgraduate Level** Guest lecturer for advanced NLP. I contributed to preparing and teaching topics in machine translation and language modeling.

**Postgraduate Level** Guest lecturer for deep learning. I contribute to preparing and teaching a topic in sequence modeling.

**Postgraduate Level** Tutor for sequence modeling. I contributed to preparing and teaching all the materials.

**Postgraduate Level** Tutor for language modeling (including LLM and multilingual LLM). I contributed to preparing and teaching all the materials.