

Shijia Liu

liu.shij@northeastern.edu

Education

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|---|---|
| Northeastern University, Ph.D. in Computer Science <i>Advisor: David A. Smith</i> <i>Specialization: Natural Language Processing, Digital Humanities</i> <i>GPA: 3.96/4.00</i> | Boston, MA <i>August 2019 - May 2025 (Expected)</i> |
| Johns Hopkins University, M.S. in Computer Science <i>Specialization: Natural Language Processing, Machine Learning</i> <i>GPA: 3.87/4.00</i> | Baltimore, MD <i>August 2017 - May 2019</i> |
| Stanford University, M.S. in Electrical Engineering <i>Specialization: Optimization, Information Theory</i> <i>GPA: 3.72/4.00</i> | Stanford, CA <i>September 2012 - June 2014</i> |
| UCLA, B.S. in Electrical Engineering (Summa Cum Laude) UCLA, B.S. in Physics (Summa Cum Laude) <i>Specialization: Signal Processing, Communication Systems</i> <i>GPA: 3.90/4.00</i> | Los Angeles, CA <i>September 2008 - June 2012</i> |

Publications

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- Tracing Accounts of Racial Terror in Historical Newspapers (abstract).** Shijia Liu, David A. Smith. In *New Directions in Analyzing Text as Data 2023 (TADA 2023)*
- Detecting de minimis Code-Switching in Historical German Books.** Shijia Liu, David A. Smith. In the *Proceedings of the 28th International Conference on Computational Linguistics (COLING 2020)* [[ACL](#)]
- Measuring the Similarity of Grammatical Gender Systems by Comparing Partitions.** Arya D. McCarthy, Adina Williams, Shijia Liu, David Yarowsky, Ryan Cotterell. In the *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP 2020)* [[ACL](#)]
- On the Idiosyncrasies of the Mandarin Chinese Classifier System.** Shijia Liu, Hongyuan Mei, Adina Williams and Ryan Cotterell. In the *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2019)*. [[ACL](#)]

Publications in Preparation

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- Adapting Transformer Language Models for Predictive Typing in Brain-Computer Interfaces.** Shijia Liu, David A. Smith. [[arXiv](#)]

Industry Experience

Applied Scientist Intern at Amazon

Cambridge, MA

Alexa AI Group

June 2022 - September 2022

- Explored continual learning with noisy labeled data for natural language understanding tasks.
- Currently preparing a paper submission for the work done.

Financial Software Developer at Bloomberg L.P.

New York, NY

Electronic Order Routing Group

Oct 2014 - June 2017

- Designed and developed backend applications for the company's next-generation real-time electronic trading platform.
- Over ~100,000 trading orders from ~20,000 users flowing through the applications every day.
- Used C++, C and Python in software development. Programmed in multithreading environment.

Software Engineer II Intern at Cisco Systems, Inc

San Jose, CA

Data Center Group

June 2013 - August 2013

- Developed Python scripts to automatically diagnose and extract critical information from core dump files. This helped accelerate the testing process for the QA team.
- Developed Python scripts to automatically generate diagrams of UCS server clusters.

Teaching Experience

Teaching Assistant for Programming in C++ at Northeastern University

Boston, MA

Instructor: Dr. Vidoje Mihajlovikj

Spring 2020

Course Assistant for Artificial Intelligence at JHU

Baltimore, MD

Instructor: Dr. Philipp Koehn

Spring 2019

Course Assistant for Natural Language Processing at JHU

Baltimore, MD

Instructor: Dr. Jason Eisner

Fall 2018

Course Assistant for Intermediate Programming at JHU

Baltimore, MD

Instructors: Dr. Sara More, Dr. Ben Langmead, Dr. Misha Kazhdan

Fall 2017 - Spring 2018

Honors and Awards

Tau Beta Pi Member

2010

Champion Team Member, UCLA Microsoft Programming Contest

2009

Skills

- Programming Languages: Python, C++, C, Java, R
- Data Analysis: Matlab, SQL, Excel
- Operating Systems: Linux, Windows
- Deep Learning Framework: PyTorch, Huggingface