Shijia Liu
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Education

Northeastern University, Ph.D. in Computer Science　　　　　　　　**Boston, MA**
Advisor: David A. Smith　　　　　　　　　　　　　*August 2019 - July 2026 (Expected)*
Specialization: Natural Language Processing, Digital Humanities
GPA: 3.97/4.00

Johns Hopkins University, M.S. in Computer Science　　　　　　　　**Baltimore, MD**
Specialization: Natural Language Processing, Machine Learning　　　　*August 2017 - May 2019*
GPA: 3.87/4.00

Stanford University, M.S. in Electrical Engineering　　　　　　　　**Stanford, CA**
Specialization: Optimization, Information Theory　　　　　　　*September 2012 - June 2014*
GPA: 3.72/4.00

UCLA, B.S. in Electrical Engineering (Summa Cum Laude)
UCLA, B.S. in Physics (Summa Cum Laude)　　　　　　　　　**Los Angeles, CA**
Specialization: Signal Processing, Communication Systems　　　　*September 2008 - June 2012*
GPA: 3.90/4.00

Publications

Through the Lens of History: Methods for Analyzing Temporal Variation in Content and Framing of State-run Chinese Newspapers. Shijia Liu, David A. Smith. In the *Proceedings of the 2025 Annual Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL 2025)* [ACL]

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)*

Adapting Transformer Language Models for Predictive Typing in Brain-Computer Interfaces. Shijia Liu, David A. Smith. *(2023)* [arXiv]

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]

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.
− Explored variations of EWC and self-replay methods.

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 Natural Language Processing at Northeastern University Boston, MA
Instructor: Dr. Silvio Amir   *Fall 2025*

Teaching Assistant for Object Oriented Design at Northeastern University   **Boston, MA**
Instructor: Dr. Vidoje Mihajlovikj   *Summer 2025*

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: Pandas, Matlab, SQL, Excel
– Operating Systems: Linux, Windows
– Deep Learning Framework: PyTorch, Huggingface, Scikit-Learn