Raymond Xiong

Email: raymond.xiong@duke.edu | Homepage: rayarxti.github.io | Updated: Sept 2025

Education

Duke University Aug. 2022 – May 2026
BS in Computer Science, BS in Statistical Science, Minor in Linguistics *Durham, NC*

- GPA: 3.98 / 4.00

Publication

Wong, L., Ali, A., **Xiong, R.**, Shen, S. Z., Kim, Y., & Agrawal, M. (2025). Retrieval-augmented systems can be dangerous medical communicators. *Proceedings of the 42nd International Conference on Machine Learning.* https://arxiv.org/abs/2502.14898.

Xiong, R., Chen, Y. (2025). A Mixed-Effects Analysis of Addressee Honorifics in Japanese Voice Actor Events. To present on the 2026 Linguistic Society of America (LSA) Annual Meeting.

Xu, Q., **Xiong, R. M.**, Zhao, M., & Wang, H. (2025). The structure, function, and quality of the social convoy for improvements in depressive symptoms in urban and rural China: A 3-year longitudinal cohort study. *International Psychogeriatrics*, 37(1), 100004. https://doi.org/10.1016/j.inpsyc.2024.100004.

Xiong, R. M., Xie, T., Zhang, H., Li, T., Gong, G., Yu, X., & He, Y. (2022). The pattern of cortical thickness underlying disruptive behaviors in Alzheimer's disease. *Psychoradiology*, 2(3), 113–120. https://doi.org/10.1093/psyrad/kkac017.

Research Experience

Duke University Agrawal Lab Nov. 2024 – Present
Undergraduate researcher *Durham, NC*

Response Verifiability of LLM-powered RAG | *advised by Monica Agrawal*

- Analyzed Google AI Overview & Perplexity responses to medical questions, to investigate response verifiability deficits in current-state large language model(LLM)-powered search engine systems in medical contexts. Built web scraping and evaluation pipelines using cutting-edge tools and methods, including LLM-as-a-judge for automatic evaluation.

Duke University Zhang & Zhuo Lab Mar. 2024 – Present
Undergraduate researcher *Durham, NC*

Automatic Medical Database | *advised by Anru Zhang and Danyang Zhuo*

- Created an end-to-end AI app to facilitate electronic health records data analytics for healthcare researchers. Tackled the Text-to-SQL problem by combining state-of-the-art few-shot and chain-of-thought prompting methods and greatly boosting model performance.

Duke University Chen Group Apr. 2025 – Present
Undergraduate researcher *Durham, NC*

Japanese Sociopragmatics Analysis | *advised by Yunchuan Chen*

- Analyzed the strategic use of addressee honorifics by Japanese native speakers in a YouTube series. Incorporated state-of-the-art speech recognition models for automatic annotation. Used generalized linear mixed-effects models to model the occurrence of addressee honorifics and investigate the role of contextual factors.

Peking Uni Institute of Mental Health Dementia Care and Research Center Jun. 2023 – Jun. 2024
Intern Researcher *Remote*

Social convery & Depression | *advised by Huali Wang and Mei Zhao*

- Investigated the influence of the social convoy and urban-rural status on the improvement of depression. Coded in Python to process data from a China health database, construct models, create data visualizations, and present results.

Beijing Normal Uni Lab of Cognitive Neuroscience and Learning Nov. 2019 – Sept. 2022
Visiting high school student researcher *Beijing, CHN*

Cortical patterns of agitation in Alzheimer's | *advised by He Yong*

- Proposed a study examining the relationship between cortical thickness and Alzheimer's patients' agitation. Secured funding from the China High School Science Talent Program. Processed MRI T1-weighted image data using the CIVET pipeline and conducted statistical testing in MATLAB.

Teaching Experience

Duke Unviersity Jan. 2024 – Present
Undergraduate Teaching Assistant *Durham, NC*

COMPSCI330 Design & Analysis of Algorithms | *instructed by Brandon Fain* Spring 2025, Fall 2025

COMPSCI572 Natural Language Processing | *instructed by Monica Agrawal* Spring 2025

STA432 Stat Inference & Learning | *instructed by Filippo Ascolani* Fall 2024

COMPSCI210 Intro to Computer Systems | *instructed by Jeff Chase* Spring 2024, Fall 2024

- Led office hours to provide assignment assistance and explain challenging concepts in lecture to majors and non-majors
- Led staff meeting to refresh on topics including dynamic programming and greedy algorithms
- Developed answer keys to assignments, including Python implementations of conditional random field models and Transformers. Graded assignments and exams.

Other Experience

Duke University Cogan Lab Sept. 2023 – May 2025
Undergraduate Intern Technician *Durham, NC*

- Revamped intracranial electroencephalography data processing pipelines from Python to C to enhance efficiency.
- Led the packaging and publishing of the pipelines as the IEEG package on PyPI.
- Contributed to lab meetings & journal clubs by collaborating with multiple groups to critique each other's work and discuss cutting-edge research literature.

Duke Chinese Student Association Oct. 2022 – Apr. 2025
President, Cultural VP & Chair (-Mar. 2024) *Durham, NC*

- Steered cultural integration and enhanced the impact of the community on campus by organizing cultural and social events with an average of 100+ attendances; advertised through multiple channels to attract more non-Asian attendees than in previous years.
- Increased club funding by 60% during presidency.
- Initiated to create a web application collecting student course evaluation feedback to promote community support.

Duke Statistical Science Majors Union May 2023 – May 2024
Communications Officer *Durham, NC*

- Organized book-bagging information sessions, lunches with faculty and alumni panels to strengthen academic and social bonds within the undergraduate statistical science community.

Awards & Honors

Dean's List with Distinction Dec 2024, May 2024

- Top 10% of ∼1,300 undergraduate students in Trinity College of Arts & Sciences.

Duke URS Conference Award May 2025

Duke URS Assistantship Award May 2025, Sept 2025

Duke CS+ Program Dec 2024, May 2024

- $5000 grant for summer undergraduate research with faculty.

Mathematical Contest in Modeling 2023 Meritorious Winner Apr. 2023

- Top 9% out of 11,296 contestants.