RAYMOND XIONG

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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

[*]*Co-first authorship.*

Wong, L., Ali, A., **Xiong, R. M.**, Shen, S. Z., Kim, Y., & Agrawal, M. (2025). Position: Retrieval-augmented systems can be dangerous medical communicators. *Proceedings of the 42nd International Conference on Machine Learning*, *Proceedings of Machine Learning Research (PMLR) 267*, 82347-82359.

Xiong, R., Chen, Y. (2025). A Mixed-Effects Analysis of Addressee Honorifics in Japanese Voice Actor Events. To appear in the *Proceedings of the 2026 Annual Meeting of the Linguistic Society of America*. Selected for oral presentation at LSA 2026.

Xiong, R. M., Chen, P., Dong, T., Lu, J., Goldstein, B., Zhuo, D., & Zhang, A. R. (2025). Reliable Curation of EHR Dataset via Large Language Models under Environmental Constraints. *arXiv*.

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.

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.

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 Playwright-based web scraping and LLM-as-a-judge automatic evaluation pipelines.

False Assumptions in Patient Information Seeking | *advised by Monica Agrawal*
- Investigated false assumptions in health-related questions that people commonly ask and curated a corresponding dataset. Tested various open-source and production LLMs to find that they struggle to identify incorrect assumptions in everyday questions. Presented at the 2025 Machine Learning for Health (ML4H) Symposium.

Duke University Chen Group Mar. 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. Annotated data using automatic speech recognition models. Used generalized linear mixed-effects models to model the occurrence of addressee honorifics and investigate the role of conversation contextual factors.

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

LLM-powered EHR Dataset Curation | *advised by Anru Zhang and Danyang Zhuo*
- Created an end-to-end AI app to facilitate electronic health records data analytics for healthcare researchers. Improved execution accuracy of Text-to-SQL through few-shot and chain-of-thought prompting with schema information.

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

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

- Investigated the influence of the social convoy and urban-rural status on the improvement of depression. Used Python to process data from a large-scale health database, perform logistic regression analysis, and create visualizations.

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

Cortical Patterns of AD Disruptive Behaviors | *advised by Yong He*

- Proposed a study examining the relationship between cortical thickness and disruptive behaviors in Alzheimer's disease patients. 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 University Jan. 2024 – Present
Undergraduate Teaching Assistant *Durham, NC*

COMPSCI572 Natural Language Processing | *instructed by Bhuwan Dhingra* Spring 2026
| *instructed by Monica Agrawal* Spring 2025
COMPSCI330 Design & Analysis of Algorithms | *instructed by Kamaesh Munagala* Fall 2025
| *instructed by Brandon Fain & Debmalya Panigrahi* Spring 2025
STA432 Stat Inference & Learning | *instructed by Filippo Ascolani* Fall 2024
COMPSCI210 Intro to Computer Systems | *instructed by Jeffrey Chase* Fall 2024
| *instructed by Danyang Zhuo & Lisa Wu Wills* SPring 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 attendance of 100+; 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 alum panels to strengthen academic and social bonds within the undergraduate statistical science community.

Awards & Honors

Dean's List with Distinction Fall & Spring 2024

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

Duke CS Department Travel Award Nov. 2025

- Competitive travel fellowship supporting poster presentation at ML4H 2025.

Duke Linguistics Department Travel Award Oct. 2025

- Competitive travel fellowship supporting poster presentation at LSA 2026.

Asian/Pacific Studies Institute Conference Travel Award Sept. 2025

- Competitive travel fellowship supporting poster presentation at LSA 2026.

Duke URS Conference Award Sept. & May 2025

- Competitive travel fellowship supporting poster presentation at ICML 2025 and ML4H 2025.

Duke URS Assistantship Award Sept. & May 2025

- Competitive research scholarship supporting undergraduate research with faculty.

Duke CS+ Program May 2024

- Competitive research scholarship for summer undergraduate research with faculty.

Mathematical Contest in Modeling 2023 Meritorious Winner Apr. 2023

- Top 9% out of 11,296 contestants.