

# RAYMOND XIONG

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## EDUCATION

### Duke University

BS in Computer Science, BS in Statistical Science, Minor in Linguistics

- GPA: 3.98 / 4.00

Aug. 2022 – May 2026

Durham, NC

## PUBLICATION

\* *Equal contribution.*

Wong, L., Ali, A., **Xiong, R. M.**, 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*, in *Proceedings of Machine Learning Research* 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

Undergraduate researcher

Nov. 2024 – Present

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

Undergraduate researcher

Mar. 2025 – Present

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

Undergraduate researcher

Mar. 2024 – Present

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***Intern Researcher*

Jun. 2023 – Jun. 2024

*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***Visiting high school student researcher*

Nov. 2019 – Sept. 2022

*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.

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**TEACHING EXPERIENCE****Duke University***Undergraduate Teaching Assistant*

Jan. 2024 – Present

*Durham, NC***COMPSCI330 Design & Analysis of Algorithms** | *instructed by Brandon Fain*

Fall &amp; Spring 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*

Fall &amp; 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.

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**OTHER EXPERIENCE****Duke University Cogan Lab***Undergraduate Intern Technician*

Sept. 2023 – May 2025

*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***President, Cultural VP & Chair (-Mar. 2024)*

Oct. 2022 – Apr. 2025

*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***Communications Officer*

May 2023 – May 2024

*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

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<b>Dean's List with Distinction</b>	Fall & Spring 2024
<ul style="list-style-type: none"><li>• Top 10% of ~1,300 undergraduate students in Trinity College of Arts &amp; Sciences of Duke University.</li></ul>	
<b>Duke CS Department Travel Award</b>	Nov. 2025
<ul style="list-style-type: none"><li>• Competitive travel fellowship supporting poster presentation at ML4H 2025.</li></ul>	
<b>Duke Linguistics Department Travel Award</b>	Oct. 2025
<ul style="list-style-type: none"><li>• Competitive travel fellowship supporting poster presentation at LSA 2026.</li></ul>	
<b>Asian/Pacific Studies Institute Conference Travel Award</b>	Sept. 2025
<ul style="list-style-type: none"><li>• Competitive travel fellowship supporting poster presentation at LSA 2026.</li></ul>	
<b>Duke URS Conference Award</b>	Sept. & May 2025
<ul style="list-style-type: none"><li>• Competitive travel fellowship supporting poster presentation at ICML 2025 and ML4H 2025.</li></ul>	
<b>Duke URS Assistantship Award</b>	Sept. & May 2025
<ul style="list-style-type: none"><li>• Competitive research scholarship supporting undergraduate research with faculty.</li></ul>	
<b>Duke CS+ Program</b>	May 2024
<ul style="list-style-type: none"><li>• Competitive research scholarship for summer undergraduate research with faculty.</li></ul>	
<b>Mathematical Contest in Modeling 2023 Meritorious Winner</b>	Apr. 2023
<ul style="list-style-type: none"><li>• Top 9% out of 11,296 contestants.</li></ul>	