

RAYMOND XIONG

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EDUCATION

Duke University <i>BS in Computer Science, BS in Statistical Science, Minor in Linguistics</i>	Aug. 2022 – May 2026
	<i>Durham, NC</i>

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 <i>Undergraduate researcher</i>	Nov. 2024 – Present
	<i>Durham, NC</i>

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 <i>Undergraduate researcher</i>	Mar. 2025 – Present
	<i>Durham, NC</i>

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 <i>Undergraduate researcher</i>	Mar. 2024 – Present
	<i>Durham, NC</i>

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 <i>Intern Researcher</i>	Jun. 2023 – Jun. 2024 Remote
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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 <i>Visiting high school student researcher</i>	Nov. 2019 – Sept. 2022 Beijing, CHN
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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 <i>Undergraduate Teaching Assistant</i>	Jan. 2024 – Present Durham, NC
COMPSCI330 Design & Analysis of Algorithms instructed by Brandon Fain	Fall & 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 & 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 <i>Undergraduate Intern Technician</i>	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 <i>President, Cultural VP & Chair (-Mar. 2024)</i>	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 <i>Communications Officer</i>	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

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.	