

Zihan Liang

PHD STUDENT · COMPUTATIONAL BIOLOGY AND BIOINFORMATICS PROGRAM, DUKE UNIVERSITY

Hock Plaza, Suite 1106, Room 11028, 2424 Erwin Rd, Durham, NC 27705, USA

✉ zihan.liang@duke.edu | 🌐 www.zihanliang.com | 📱 [zihanliang](#) | 🌐 [zihan-liang](#)

Education

Duke University

Durham, NC

DOCTOR OF PHILOSOPHY IN COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

Aug. 2026 - Present

- Ph.D. Advisor: [Dr. Anru Zhang](#)

Emory University

Atlanta, GA

BACHELOR OF SCIENCE IN APPLIED MATHEMATICS AND STATISTICS WITH HIGHEST HONORS

Aug. 2023 - May 2026

- GPA: 3.99/4.00
- Minors in Artificial Intelligence
- Independent Research and Honors Program Advisor: [Dr. Ruoxuan Xiong](#)
- Relevant Courseworks:
 - Mathematics: Multivariable Calculus, Linear Algebra, Discrete Mathematics, Differential Equations, Linear Optimization, Graph Theory (Doctoral Level), Real Analysis
 - Statistics & Computation: Mathematical Statistics, Numerical Analysis, Data Structures & Algorithms, Data Science Computing, Machine Learning, Text Data Science, Information Visualization, Experimental Methods, Causal Inference (Doctoral Level)

Publications

PUBLISHED

- Pan, Z^{*}, **Liang, Z^{*}**, Xiong, R. 2026. Two-Sided State-Space Models for Sequential Recommendation with Non-Random Multimodal Review Feedback. Findings of the Association for Computational Linguistics: EMNLP 2026.
- Pan, Z^{*}, **Liang, Z^{*}**, Kabbara, J., Emami, A. 2026. DART: Mitigating Harm Drift in Difference-Aware LLMs via Distill-Audit-Repair Training. Findings of the Association for Computational Linguistics: ACL 2026.
- Liang, Z^{*}**, Pan, Z^{*}, Xiong, R. 2026. Learning Dynamic Representations and Policies from Multimodal Clinical Time-Series with Informative Missingness. Findings of the Association for Computational Linguistics: ACL 2026.
- Shen, Y^{*}, Jiang, D^{*}, **Liang, Z^{*}**, Wei, Y^{*}, Yang, W., Sun, X., Huang, Z., Wang, S., Yao, Q. 2026. MambaDATG: Domain-Adaptive Tri-Plane-Gated Pre-training for 3D Abdominal Segmentation. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2026), Oral Presentation.
- Liang, Z^{*}**, Pan, Z^{*}, Xiong, R. 2025. Causal Representation Learning from Multimodal Clinical Records under Non-Random Modality Missingness. Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP 2025).
- Liang, Z^{*}**, Pan, Z^{*}, Dey, S. K., Ismail, A. 2025. CareLab at #SMM4H-HeaRD 2025: Insomnia Detection and Food Safety Event Extraction with Domain-Aware Transformers. Proceedings of the International AAAI Conference on Web and Social Media (ICWSM 2025) Workshops.
- Liang, Z.**, Pan, Z. 2026. Dynamic Policy Design for Autonomous Taxi Adoption: A Hierarchical Game-Theoretic Framework. Transportation Research Board 105th Annual Meeting (TRB 2026).

IN REVIEW

- Liang, Z^{*}**, Pan, Z^{*}, Yu, S. 2026. Adaptive Spatiotemporal Graph Neural Networks with Trend-Aware Prediction and Validation-Gated Calibration for Traffic Flow Forecasting. IEEE Transactions on Intelligent Transportation Systems, under review.

Research Experiences

Collective Action & Research for Equity (CARE) Lab, Emory University

Atlanta, GA

RESEARCH ASSISTANT, ADVISOR: DR. AZRA ISMAIL

Sept. 2024 - May 2026

- Built an interactive dashboard for nearly 1,000 user records using JavaScript, Python, and HTML.
- Maintained a WhatsApp education bot serving 15,000+ teachers and 600,000+ students across India.
- Developed an offline-first Android app for classroom data collection and secure Google Drive synchronization.

Polymath Jr REU Summer Program

Remote

RESEARCH ASSISTANT

Jun. 2025 - Aug. 2025

- Developed ODE-based models to study community transmission of *C. difficile*.
- Evaluated intervention strategies for controlling community spread of *C. difficile*.
- Implemented disease simulations and mitigation analyses in MATLAB and R.

Honors & Awards

2026	Elected to Phi Beta Kappa (ΦBK), Phi Beta Kappa Society	
2025	Best Visualization Award, American Statistical Association DataFest	
2025	Conference Presentation Grant, Emory University	\$2,500
2023, 2024	Dean's List, Emory College of Arts and Sciences	
2022	American Invitational Mathematics Examination (AIME), Score: 9/15, Mathematical Association of America	

Teaching Experience

2026	Teaching Assistant and Grader of Machine Learning, Emory University	Atlanta, GA
2025	Teaching Assistant and Grader of Algebra for Mathematical Olympiads, AwesomeMath	Remote

Outreach, Professional Development & Leadership Experiences

LEADERSHIP EXPERIENCES

2023-2026	Emory Chinese Student Association, President	Atlanta, GA
2024-2026	Emory Artificial Intelligence & Data Association, Founder and President	Atlanta, GA
2022-2024	YouthBuild Program - Xi'an, Co-Founder & Standing Council Member	Xi'an, Shaanxi

PEER REVIEW

Reviewer	ACL 2026 Workshop on Social Media Mining for Health and Health Real-World Data (SMM4H-HeaRD)
Reviewer	ACM CIKM 2026 Workshop on LLM Agents for Social Simulation (LASS)

Skills

Python	PROFICIENT	PyTorch • TensorFlow • NumPy • Pandas • Scikit-learn
R	PROFICIENT	Statistical modeling • Data visualization
TeX	PROFICIENT	
MATLAB	INTERMEDIATE	Numerical analysis • Signal processing
Java	INTERMEDIATE	
JavaScript & HTML	INTERMEDIATE	Data visualization • Prototyping