
Jiecheng Lu

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Research Summary

Ph.D. student in Machine Learning at Georgia Tech advised by Shihao Yang. My research focuses on developing sequence-model architectures that improve *expressivity under practical compute constraints*, spanning attention mechanisms, linear attention, dynamic-MLP views of sequence modeling, and time series foundation models. In the 2024-2026 period, I have published 9 papers as the main contributor at top machine learning venues, including ICLR, ICML, and NeurIPS.

Education

Georgia Institute of Technology

Ph.D. in Machine Learning (Advisor: Shihao Yang)

M.S. in Analytics

Atlanta, GA

Aug. 2023 – present

Aug. 2021 – Aug. 2023

Tianjin University

B.S. in Logistics Engineering

Tianjin, China

Sep. 2016 – Jun. 2020

Research Interests

Foundation models; efficient and expressive sequence modeling; linear attention; in-context reasoning; time series analysis; sequence modeling across NLP, vision, and scientific data.

Selected Publications

First-authored papers

- [\[ICML 2026\]](#) HyperMLP: An Integrated Perspective for Sequence Modeling. Jiecheng Lu, Shihao Yang.
- [\[ICLR 2026\]](#) Free Energy Mixer. Jiecheng Lu, Shihao Yang.
- [\[NeurIPS 2025 Spotlight\]](#) ZeroS: Zero-Sum Linear Attention for Efficient Transformers. Jiecheng Lu, Xu Han, Yan Sun, Viresh Pati, Yubin Kim, Siddhartha Somani, Shihao Yang.
- [\[ICML 2025\]](#) Linear Transformers as VAR Models: Aligning Autoregressive Attention Mechanisms with Autoregressive Forecasting. Jiecheng Lu, Shihao Yang.
- [\[ICML 2025\]](#) WAVE: Weighted Autoregressive Varying Gate for Time Series Forecasting. Jiecheng Lu, Xu Han, Yan Sun, Shihao Yang.
- [\[ICLR 2025\]](#) In-context Time Series Predictor. Jiecheng Lu, Yan Sun, Shihao Yang.
- [\[ICML 2024\]](#) CATS: Enhancing Multivariate Time Series Forecasting by Constructing Auxiliary Time Series as Exogenous Variables. Jiecheng Lu, Xu Han, Yan Sun, Shihao Yang.
- [\[ICLR 2024\]](#) ARM: Refining Multivariate Forecasting with Adaptive Temporal-Contextual Learning. Jiecheng Lu, Xu Han, Shihao Yang.

Corresponding-Author Publications and Mentored Research Leadership

- [\[ICML 2026\]](#) StretchTime: Adaptive Time Series Forecasting via Symplectic Attention. Yubin Kim, Viresh Pati, Jevon Twitty, Vinh Pham, Shihao Yang, Jiecheng Lu*. (*corresponding author; mentored undergraduate first authors)

Honors, Grants, and Research Support

Awards

- George Fellowship, Georgia Tech (2026)
- Best Poster Award (1st Place), AASF AIX Summit 2026, Poster: “Free Energy Mixer”
- Margaret and Stephen Kendrick PhD Student Fellowship for Research Excellence, Georgia Tech (2025)
- M.H. Stewart Fellowship, Georgia Tech (2023)

Computing grants

- **Lambda Research Grant**, PI, Mar. 2026 – Mar. 2027. *Subquadratic HyperMLP via Convolution-Based Sequence Mixing*.
- **NVIDIA Academic Grant**, awarded project, Apr. 2026 – Sep. 2026. *Scaling Zero-Sum Linear Attention for Cross-Modal Foundation Models*.
- **NSF ACCESS Program**, awarded project, Sep. 2025 – Sep. 2026. *Advanced Transformer-based Models for Long-term Time Series Forecasting*.

Leadership, Teaching, and Service

Research leadership and mentoring. Since Spring 2025, I have organized and led weekly research discussions for a five-student Georgia Tech undergraduate Sequential AI team, mentoring students on experiment design and paper writing. As of Spring 2026, this team completed three manuscripts: one published paper (ZeroS, NeurIPS 2025 Spotlight) and two ICML 2026 submissions with undergraduate first authors and me as corresponding/final author.

Teaching experience. Independent instructor, *ISyE 4031 Regression and Forecasting* (3 sections: ASY/RES/RHK), Georgia Tech, Summer 2026. Participant in Georgia Tech’s Tech to Teaching program and finished CETL 8717 Course Design for Higher Education.

Reviewing service. NeurIPS 2024-2026, ICLR 2025-2026, ICML 2025-2026, and IEEE Internet of Things Journal.

Selected Talks

- **Invited Talk**, *Rethinking Sequence Modeling with HyperMLP: An Integrated Architectural Perspective*, Knowledge Engineering Group, Tsinghua University (hosted by Prof. Jie Tang), Mar. 2026.
- PhD Seminar, *Rethinking Sequence Modeling: LLM Scaling Laws, Expressivity-Efficiency Tradeoffs, and the Role of Architecture*, Georgia Tech Machine Learning Student Seminar, Apr. 2026.
- PhD Seminar, *Rethinking Sequence Modeling: LLM Scaling Laws, Expressivity-Efficiency Tradeoffs, and the Role of Architecture*, Georgia Tech ISyE PhD Student Seminar, Feb. 2026.

Research Translation

CDC FluSight forecasting hub Fall 2024 – Present
Submit weekly influenza hospitalization forecasts for all U.S. states to the CDC FluSight forecasting hub (entry name: Gatech-ensemble), translating time-series forecasting research into public-health decision support.

Professional Experience

Tencent Medical AI Lab (JARVIS Lab), Data Scientist Intern Jul. 2021 – Jul. 2022
Led development of deep learning and statistical models for medical insurance forecasting and epidemic monitoring; co-authored 2 medical time-series papers, filed 6 patents as first inventor, and delivered technical solutions for medical facilities across 4 major cities handling up to 10 million data points daily.

Amazon Private Brands, Global Sourcing Team, Business Analyst Intern Jan. 2021 – Jul. 2021
Applied machine learning and causal inference to cost analysis and sourcing decisions; built AWS-based dashboard web apps that informed decision-making and reported savings of over USD 100,000 monthly.

Peking University, Guanghua School of Management, Research Assistant Sep. 2020 – Jan. 2021

Country Garden Group, Strategic and Data Analytics Intern Jul. 2020 – Sep. 2020

Selected Patents

- **CN115114345B**, Feature Representation Extraction for Time-Series Data.
- **CN114358186B**, Data Processing for Attention-Based Time-Series Forecasting.
- **CN115130656A**, Training an Anomaly Detection Model for Time-Series Data.
- **CN117010542A**, Multi-Source Multimodal Data Prediction.
- **CN117012347A**, Medical Data Generation from Unordered Inputs.
- **CN114676176A**, Interpretable Time-Series Forecasting.