

YAO XIAO

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EDUCATION

Georgia Institute Technology, Computer Science, Minor in FinTech, 3rd Year

May 2027

Bachelor of Science in Computer Science

GPA: 3.75/4.0

Artificial Intelligence and Modeling & Simulation

Coursework – Data Structures & Algorithms for Applications, Design & Analysis of Algorithms, Computer Organization and Programming, Machine Learning, Deep Learning, Linear Algebra, Probability and Statistic, Introduction to Object Oriented Programming, Discrete Mathematics, Differential Equation, Combinatorics

Interests – AI, Computer Vision, Natural Language Processing, Deep Learning, LLMs, Cybersecurity, Digital Logic, System Design, Autonomous Robots, Modeling & Simulation, Machine Learning for Finance

WORK EXPERIENCE

Machine Learning Researcher, Surrogate Modeling for Urban Regeneration Lab

Jan 2025 - Present

➤ Working under Professor Patrick Kastner. Conducting cutting-edge research in machine learning-driven surrogate modeling to accelerate environmental simulations for urban regeneration projects.

Undergraduate Teaching Assistant, School of Physics, Georgia Tech

Jan 2025 - Present

➤ Collaborate with Professor Emily Alicea-Muñoz and graduate teaching assistants to support PHYS 2211 (Intro Physics I), focused on mechanics and kinematics.

➤ Lead and facilitate lab sessions, and offer one-on-one support to students.

Research and Development Assistant, WeiSheng & Wecom

June - July 2024

➤ Wang AI Model function development, built back-end architecture and defect fixes the interface

➤ Technical routing design, UI design, client communication, daily meeting

RESEARCH & PROJECTS

Responsible AI for Decision Making

Python (PyTorch), LSTM forecasting, FinBERT/Hugging Face NLP, MSE/MAE.

➤ Built LSTM forecasting models on S&P 500 and NYSE datasets, achieving reliable next-day stock price predictions with error rates tracked through MSE/MAE metrics

➤ Applied NLP methods (FinBERT, Hugging Face, BERTopic) to financial news, linking sentiment and industry signals to market movements for more accurate decision support

Atlanta Food Finder

Python, Django, JavaScript, HTML, CSS, SQLite, Ajax, Agile

➤ Designed and developed a web application using Django and Google Maps that allows users to search for and discover restaurants in Atlanta

Digital Real-world Modeling and Ecological Sensitivity Analysis of Urban Parks: Case of Orchid Garden

Context Capture, ArcGIS, InVEST, Python (pandas/NumPy/SALib)

➤ Used Phantom 4 Pro V2.0 to do UAV tilt photography and Context Capture to construct 3D modeling, then used ArcGIS to perform ecological sensitivity analysis of the park's real-time data, integrated with the 3D model

LEADERSHIP ACTIVITIES

Squad Leader of Yellow Jacket Fencing Club, Men's Sabre

August 2023 - Present

➤ Manage and organize weekly training for Sabre team, competition instruction

➤ Team coaching in tournaments; help Georgia Tech won the third place in the nation in USACFC 2024

TECHNICAL SKILLS

Languages: C++, C, Java, Python, JavaScript, TypeScript, Terraform, HTML, CSS, SQLite, SQL, MATLAB, Assembly

Frameworks: Django, ReactJS, Spring Boot, JUnit, Redux

Developer Tools: Docker, Rancher, Kubernetes, Linux, DBeaver, Git, GitHub, GDB, IntelliJ, VS Code, PyCharm, Datadog, Eclipse, Jupyter, Postman

Libraries: pthreads, SciPy, NumPy, pandas, PyTorch, Pybind11, Qiskit, BeautifulSoup, Zustand, Redis