

Sean Liu

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Education

Georgia Institute of Technology, Atlanta, GA

- M.S. in Computer Science, Machine Learning concentration (GPA 3.9) *August 2024 - December 2025*
- B.S. in Computer Science, minor in Economics (GPA 3.89) *August 2021 – May 2024*

Skills

Programming Languages:	Python, Java, C/C++, C#, SQL, R, JavaScript, Go, HTML, VBA, VB.NET, Assembly, Stata, MATLAB, Mathematica
Frameworks/Tools:	Tableau, SQL Server, SQLite, MySQL, Access, Excel, AWS, Docker, Win32, Linux, NumPy, Pandas, Matplotlib, sklearn, PyTorch, TensorFlow, Streamlit
Software Development:	Object-oriented programming, Data structures and algorithms, Data warehousing, Data mining, Cybersecurity, Web scraping, UI/UX
Core Skills:	Artificial intelligence, Machine learning, Deep learning, Data analytics, Data visualization, Computer vision, Optimization models, Simulation models

Experiences

Charles Schwab, Software Engineering Intern, Lone Tree, CO *June 2025 – August 2025*

- Develop and enhance software to streamline AI-driven model risk management processes
- Create data visualization tools to analyze machine learning model performance and support risk evaluation
- Collaborate across departments to produce scalable software for model oversight

Georgia Tech Financial Services Innovation Lab, Graduate Research Assistant, Atlanta, GA *August 2024 – May 2025*

- Create tools leveraging artificial intelligence to support financial and economic decision-making
- Serve as a liaison between the professor, research staff, and interns, facilitating collaboration and communication
- Supervise 20 research interns, providing technical guidance in data curation, coding, and model and application development

Georgia Tech Financial Services Innovation Lab, Volunteer Research Assistant, Atlanta, GA *May 2024 - August 2024*

- Conducted multidisciplinary research between Georgia Tech's College of Computing and College of Business
- Analyzed the decision-making and predictive abilities of large language models in financial contexts
- Wrote Python scripts to aggregate financial data and legislation, contributing to training a financial large language model

Vertically Integrated Project, Researcher, Atlanta, GA *August 2022 - December 2023*

- Collaborated on the Autonomous and Connected Transportation (ACT) Driving Simulator, a faculty-led multidisciplinary project
- Designed innovative transportation solutions, focusing on accessibility and sustainability in smart cities
- Created machine learning models in Python to detect driver distraction and predict driver behavior from physiological data, achieving over 80% test accuracy and enhancing road safety

Alpha Models, Inc., Intern, Cumming, GA *May 2023 - August 2023*

- Designed and implemented algorithms with C++ to scan and identify continuous contact areas of artificial knee joints
- Developed a simulation model with C++ for railcar shipments using constrained shortest path algorithm
- Developed an algorithmic C++ model to solve the Vehicle Routing Problem for planning and scheduling freight railroad maintenance

Alpha Models, Inc., Intern, Cumming, GA *May 2022 - August 2022*

- Studied business policies, operational constraints, and government regulations in the railroad transportation industry
- Analyzed industrial transportation data to evaluate economic performance and regulation appliance
- Developed optimization models with C++ using graph algorithms to determine the most efficient rail route