Leo Liang

500 Jospeh C. Wilson Blvd, Rochester, NY 14627 • +1 (858) 829-9513 • leoliang.co@gmail.com • linkedin.com/in/ileoliang/

PROFILE

Undergraduate student pursuing a dual degree in Applied Mathematics and Computer Science. Strong analytical skills, passion for solving complex problems and a dedication to detail and creative thinking. Passionate about music and humanitarian pursuits. Seeking to apply my skills and knowledge in mathematics and computer science through operational and research roles.

EDUCATION

University of Rochester **Rochester, NY** (anticipated May 2026)

Bachelor of Science in Applied Mathematics
Bachelor of Arts in Computer Science
Minor in Music

- ***Cumulative GPA 3.91 out of 4.00; Dean's List all semesters.***

AWARDS

DAAD RISE Scholarship

Awarded one of 250 scholarships by the German DAAD to conduct a research internship in Germany over the summer.

Honoree of the 11th Heidelberg Laureate Forum:

Nominated and selected as one of 200 students worldwide by the IMU, ACM, and DNVA to spend a paid-for week in Germany interacting with laureates of mathematics and computer science (Fields Medal, Turing Award, etc.).

Phi Beta Kappa 2023 Suzanne J. O'Brien Book Award:

Nominated and selected as one of 15 out of 1500 first-year students for scholarly achievement, humanistic values, co-curricular activity, and leadership potential.

Dean's Scholarship:

Awarded $15,000 annually for academic achievement and potential for unique contribution to campus life.

SKILLS

- Languages: Python, Java, C, SQL, PHP, R, JavaScript, HTML, CSS
- Packages & Framework: TensorFlow, PyTorch, SciPy, NumPy, Pandas, Matplotlib, MQTT
- Tools: Docker, Jupyter, Git, Linux
- Modeling & Design: SysML, PlantUML

WORK EXPERIENCE

Research & Development Intern | SLAPStack GmbH **Dortmund, Germany** (Jun – Aug 2025)

- Collaborated in a seven-member early-stage startup developing AI-driven, automated warehouse logistics solutions.
- Architected and implemented AGV routing and execution algorithms, designing system behavior and module interfaces, translating mathematical logic into production-ready Python modules; documented designs using SysML diagrams.
- Built a Docker-based testing framework for real-time data streams, integrating Python services with event-driven messaging to support ML regression, model evaluation, and parameter tuning.

Co-Founder | CampusLens **Rochester, NY** (Aug 2024 – Jan 2025)

- Co-founded a computer vision startup using lightweight vision models to detect occupancy counts; developed data pipelines, labeling workflows, and model training scripts using Roboflow and Python-based CV tooling.
- Built an end-to-end prototype on a Raspberry PI, integrating inference, image capture, and data transfer pipelines; pitched system to the university's IT department, securing R&D funding.
- Led a four-person team of software and ML researchers, coordinating model development, evaluation, and deployment roadmap.

Teaching Assistant | University of Rochester Department of Mathematics **Rochester, NY** (Aug 2023 – Present)

- Achieved a 4.93 out of 5 evaluation from 200+ students, by incorporating theoretical materials in relevant real-world applications/trends and leading weekly group/individual office hours tailored to students' needs.
- Collaborated closely with professors to develop original tests and written solutions, bridging theory with real-world applications

Investment & Wealth Management Intern | Lucia Capital Group **San Diego, CA** (May - Jul 2023)

- Significantly shortened client-advisor merger wait times from days to near instant, by automating a CRM operational process using screen-scraping and Power Query, improving the firm's overall efficiency, presented to the IT team leading to adoption and integration in systems.
- Reinforced client and financial advisor meetings by generating weekly reports for buy-side operations with market research, consolidation of client information, and implementation of strategies such as DCA and VA in client portfolios.

PROJECTS / RESEARCH

ML-Driven Calibration of AGV Simulation (*publication in progress with Dr. Alexandru Rinciog, TU Dortmund*)

- Developed an ML-driven regression and post-training calibration framework for AGV simulation, integrating telemetry, model-evaluation pipelines, and large-scale regression tuning to reduce prediction error and improve AGV simulation behavior to be more consistent with real-world performance.

Multi-Modal DL for Social-Driven Stock Surge Prediction

- Architected a multimodal deep learning system combining market OHLCV data with social-attention signals using a two-stream encoder with cross-attention (Transformer/LSTM variant) for short-horizon surge prediction.

Archivist: Local-First AI File Management Assistant

- Built a local-first agentic AI assistant that autonomously classifies, organizes, and routes user files by parsing metadata, inferring intent, and learning user-specific preferences over time, enabling automated file sorting, naming, and search without cloud dependencies.

Harmonic BPM Music Recommendation Database (*view on GitHub*)

- Designed and implemented a full relational schema with ER modeling, FK constraints, normalized schemas, and JSON audio feature metadata to support efficient BPM, harmonic, and energy-based queries for generating progressive workout playlists tailored to user preferences.

Blackjack Stochastic Modelling (*view on GitHub*)

- Designed and built a blackjack simulation platform for FreeBet analysis, integrating dynamic variables, statistical modeling, combinatorial game theory, Monte Carlo methods, and result visualizations to identify optimal strategies and assess risk/performance metrics.

COMMUNITY SERVICE

Tutoring for Change **San Diego, CA**

Manager *Fall 2019 – Summer 2022*

- Led and managed a nonprofit organization, matching over 15 tutors with specific students based on teaching style, compatibility, and other key factors to ensure optimal learning outcomes.
- Received the Presidential Volunteer Service Award, the most prestigious award for civilian volunteers in the USA.