Jonathan Liang

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EDUCATION

Georgia Institute of Technology   Expected Graduation: May 2026
B.S. in Computer Science, Minor in Financial Technology   **GPA: 4.00/4.00**

WORK EXPERIENCE

Computer Science Teaching Assistant   August 2025 – Present
CS 4400 Introduction to Database Systems at Georgia Tech   *Atlanta, GA*
- Building and refining autograder infrastructure for projects and exams to streamline grading for 545 students.
- Guiding students in office hours and forums with SQL debugging and clarifying core database concepts.

Software Development Engineer Intern   May 2025 – August 2025
Amazon   *Bellevue, WA*
- Built a tool for a high-traffic service central to Amazon's ordering experience with Java, Spring, and AWS AppConfig.
- Achieved 3x reduction in average ticket resolution time and enabled more production-realistic load and stress testing.
- Authored the design document and led the design, operational readiness, and security certification reviews.
- Spearheaded coordination with other service teams, security reviewers, and product managers to secure approvals.

Software Engineer (Infrastructure and Security Team)   August 2024 – May 2025
Student Government Association IT Board at Georgia Tech   *Atlanta, GA*
- Secured apps used by 20,000+ Georgia Tech students by developing safeguards to prevent sensitive PII exposure.

Software Engineer Intern   May 2024 – August 2024
Emnovate - DigMe   *Atlanta, GA*
- Designed and built an end-to-end, fully responsive product page using Next.js and Tailwind CSS.
- Wrote and streamlined product documentation, achieving a 7x reduction in onboarding time for new customers.

Full Stack Software Engineer   August 2023 – May 2024
Data Science at Georgia Tech - Tech Team   *Atlanta, GA*
- Enhanced the Data Science at GT member portal used by 500+ faculty and students by shipping collaboration features in React.js, optimizing Express.js API endpoints and PostgreSQL queries, and deploying to Heroku.

Software and Information Technology Intern   June 2023 – August 2023
University of North Carolina Chapel Hill   *Chapel Hill, NC*
- Developed and maintained personas and event modules for CarolinaGo enhancing campus engagement for over 20,000+ students and faculty by publicizing orientations and events with PHP, JavaScript, and HTML/CSS.

PROJECTS

Agile Communications Architectures | *Python, PyTorch, scikit-learn, OpenCV, NumPy, GNU Radio*
- Developing machine learning–driven semantic compression techniques to improve the efficiency of transmitting multimedia data (image, audio, video, etc.) over Software Defined Radio systems.
- Competing in the 2025 – 2026 Air Force Research Laboratory (AFRL) Software Defined Radio (SDR) Challenge.

Full Stack Mobile Application Development: Workout Tracker | *React Native, MongoDB, GraphQL, Expo*
- Built a full-stack workout tracker to help users track workouts, designed the backend using GraphQL and MongoDB, and shipped a React Native UI with personalized dashboards, progress charts, and structured exercise flows.

Machine Learning: Fake News Detection Model | *Python, Pandas, TensorFlow/Keras*
- Built an end-to-end fake-news text classifier in Python with TensorFlow, engineered the dataset and preprocessing pipeline in Pandas with Keras TextVectorization, and trained and evaluated a neural model on held-out data.

SKILLS

Languages: Java, Python, JavaScript, TypeScript, SQL, C, C++, React Native, PHP, HTML/CSS, Swift, MATLAB
Frameworks: Spring, Next.js, React.js, Express.js, Tailwind CSS, SwiftUI, Flask, JavaFX, Alexa Skills Kit
Cloud & Databases: AWS (S3, DynamoDB, Lambda, AppConfig), PostgreSQL, MongoDB
Developer Tools: Git, Docker, Linux, Jira, Vercel, Android Studio, JupyterLab, Tableau, PyCharm, JupyterLab
Libraries: pandas, NumPy, Matplotlib, scikit-learn, TensorFlow, PyTorch, Pygame
Core Knowledge: Systems & Networks, Data Structures, Algorithms, Computer Architecture, Artificial Intelligence, Machine Learning, Computer Vision, Databases, Natural Language Processing, Object-Oriented Design, Agile, Scrum