

# Ethan Loo

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## EDUCATION

### Georgia Institute of Technology

BS Computer Science - CGPA: 3.84

Atlanta, GA

May 2022 - May 2026 (anticipated)

## EXPERIENCE

### Keysight Technologies | Eggplant

QA Engineer Intern

Penang, MY

May 2024 - Aug. 2024

- Authored and debugged automated model-based and script-based test scripts in Eggplant Functional. Discovered 4 breaking bugs and led development of automated MBT tests for the respective test cases. Wrote approximately 300 lines of code in SenseTalk.
- Spearheaded the development and implementation of front-end, back-end, and other test procedures (**Cypress tests**, API/BDD tests, MBT tests) for new systems and application features under development.
- Collaborated in defining the minimum viable product for Eggplant DAI version 7.5.0-0.

### Georgia Institute of Technology | College of Computing

Teaching Assistant

Atlanta, GA

May 2025 - Present

- Assisted in teaching CS 1331: Introduction to Object-Oriented Programming. Responsibilities include grading assignments/exams, holding office hours, and providing academic support to 161 students across 3 sections.

## PROJECTS

### Technique

Frontend Developer

- Built & deployed a new website for Georgia Tech's student-led newspaper; led frontend development in React, utilizing **Vite** & **Tailwind CSS** with the focus of modernizing the site, optimizing the mobile experience & cross-browser consistency.
- Developed a WYSIWYG editorial dashboard using **QuillJS** for rich-text editing and **react-dropzone** for drag-and-drop media uploads, with file validation and real-time upload feedback.
- Collaborated in 1-week Agile sprints on a 7-person team; managed Git branches, led code reviews, and enforced ESLint standards.

### GTEsports: Gamefest ([gamefest.gatechesports.com](https://gamefest.gatechesports.com))

Fullstack Developer

- Led frontend development for Gamefest, an esports tournament platform with **246+ competitors across Atlanta**, using **Vite** for fast builds and **Tailwind CSS** for responsive UI styling. Deployed frontend via Netlify and backend via Render, with MongoDB as the primary database.
- Built a weighted raffle system, dynamically selecting/displaying 1st-3rd place winners on a leaderboard.
- Integrated with Cloudflare to monitor analytics; served **2.13k unique visitors** and 95.3k total requests over 30 days, with 71.43% cache hit rate. Worked in 1-week Agile sprints within a 5-person team; enforced Git workflow, ESLint, and Prettier for code consistency.

### Vertically Integrated Project: Current Crisis ([currentcrisis.net](https://currentcrisis.net))

Fullstack/Systems Developer

- Architected a robust **Gurobi optimization model** hosted on Azure to simulate and optimize real-life power grid flow; engineered **cache fallback and lookahead mechanisms** to ensure real-time continuity between clients and our Azure-hosted server in case of network issues (e.g., packet loss, latency).
- Engineered a fullstack application using **Vite** and **ExpressJS** to host a build of the game and provide a platform for developers to upload and refer to documentation in an organized manner. Used **MongoDB** for data storage and retrieval and **Clerk** for safe and secure authentication.

### AI ATL 2024: AgentArena

Frontend Developer

- Developed a web-based LLM simulation platform using React for the frontend and Flask for the backend, enabling users to simulate and analyze agent interactions in multi-agent scenarios (Prisoners' Dilemma). Utilized Fetch API and React Hooks to dynamically fetch and update game state data in real-time.
- Leveraged Plotly.js for interactive data visualization, displaying agent performance metrics such as **niceness**, **forgiveness**, **retaliatory**, **troublemaking**, and **emulative behavior** over multiple simulation rounds.
- Analyzed behavioural patterns/tendencies of different LLM models (Claude, GPT-4, Gemini) when pitted against different agents/strategies (random, tit-for-tat, etc.). **Project Report**

## LEADERSHIP

### Georgia Tech Malaysia Student Association

Jan. 2023 - May 2024

Head of Outreach

- Designed impactful social media content and graphic designs using Affinity Photo and Designer, boosting Instagram engagement by 6%.

### Extracurricular Achievements:

- Achieved 1st Degree Black Belt in Taekwondo ITF.
- Achieved PADI Open Water and Advanced Open Water Diver License.
- Completed BWC (Basic Wall Course) top rope sport climbing certification.