

Ethan Loo

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EDUCATION

Georgia Institute of Technology

BS Computer Science - CGPA: 3.80

Atlanta, GA

May 2022 - May 2026 (anticipated)

EXPERIENCE

Keysight Technologies | Eggplant

Penang, MY

QA Engineer Intern

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 (MVP) for Eggplant DAI version 7.5.0-0.

PROJECTS

Connect-RX (HackGT11)

React-Native

- Developed a cross-platform medication adherence tracking app using React Native for patients and React for doctors, tackling the issue of medication non-adherence.
- Leveraged ngrok to securely expose our Flask API backend, enabling seamless communication between the React Native mobile app and the React web app for real-time testing and integration.
- Designed and integrated a SQLite database to manage and store patient medication records, ensuring reliable data persistence across devices.
- Handled push notifications and reminders for patients based on prescription schedules received from Ract app. Implemented a streak counter feature in the React Native app to gamify and reward patients for adherence.

CompViz (Create-X | launchny)

React

- **Founding member** of a Django-based application that analyzes over 15,000 accounting metrics, providing insights to small businesses by comparing against consolidated anonymized industry data and publicly available data.
- Led the development of the frontend in React, responsible for connecting the React frontend to Django backend endpoints to pull external data.
- Implemented integrations with FRED, EDGAR, and QuickBooks to incorporate micro, macro, and alternative data sources into the app.

AgentArena (AI ATL 2024)

React

- 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.

Vertically Integrated Project: Video Game for Power Grids

Unity | C#

- Developed and maintained Azure server with a focus on secure Gurobi API endpoints, efficient concurrency handling, and thread-safe configuration, ensuring high-performance and reliable data management for optimization simulations.
- Directed planning and development of UI/UX design for the video game using pixel/3D rendering software like Aseprite and MagicaVoxel.

SKILLS & INTERESTS

Programming Languages/Frameworks: HTML, CSS, JavaScript, React, React-Native, Java, Python, C, C#, SQL, PostgreSQL, SQLite, SenseTalk, LaTeX, Django, Flask API, RISC Assembly

Software: Android Studio, TKinter, Firebase, Git, GitHub, Docker, VSCode, IntelliJ, NodeJS, PopSQL, Unity, Discord Developer Tool, MagicaVoxel, Aseprite, Affinity Suite, **Microsoft Excel**, Microsoft Office, Tableau, ngrok

CLASSES

Relevant Courses: Data Structures and Algorithms, Computer Organization and Programming, **Design and Analysis of Algorithms**, Procedural Content Generation, Computer Graphics, **Systems and Networks**, Statistics and Applications