Ethan Loo

470-301-5218 | ethanlooyt@gmail.com | linkedin.com/in/ethan-loo-73a1b0236/ | shiloh4.github.io

EDUCATION

Georgia Institute of Technology — Atlanta, GA
BS Computer Science - CGPA: 3.84 — *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

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. Used an **ASP.NET Core controller to handle HTTP Post requests**.
- Designed and implemented a robust **Gurobi optimization model** to simulate and analyze power grid scenarios, optimizing power flow and reducing operational costs.
- Engineered a cache fallback system that maintained real-time data delivery during server connectivity issues (e.g., packet loss, high latency), ensuring uninterrupted system performance.
- Planned and developed the UI/UX design for the video game using pixel/3D rendering software like Aseprite and MagicaVoxel.

Connect-RX (HackGT11) — *React-Native*

- Developed a cross-platform medication adherence tracking app using React Native app for patients and React app 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 the React app. Implemented a streak counter feature in the React Native app to gamify and reward patients for adherence.

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 (Prisonners' 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.

SKILLS & TECHNICAL EXPERIENCE

Languages/Frameworks: **HTML**, **CSS**, **JavaScript**, **TypeScript**, **React**, React-Native, Java, **Python**, C, C#, SQL

Software Applications: Android Studio, Firebase, Docker, PopSQL, Unity, Figma, MagicaVoxel, Aseprite, Affinity Suite, Microsoft Excel, Tableau, **Atlassian (Jira, Confluence)**

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.