Raymond Bian

503-754-8502 | raybbian@gmail.com | linkedin.com/in/raybbian | github.com/raybbian

Education

Georgia Institute of Technology Atlanta, Georgia

Bachelor of Science in Computer Science, Minor in Mathematics. 4.0/4.0 GPA. *Expected December 2025*

Experience

Undergraduate Research Assistant Aug. 2024 - Present

Georgia Tech Space Systems Design Laboratory *Atlanta, Georgia*

- Developing a secure and robust system to store and analyze telemetry for the upcoming GDPM cube satellite.
- Creating a service to quickly insert data from NASA's telescience resource kit into a local time series database.
- Utilizing technologies such as Grafana to allow users to display and visualize telemetry data in a web browser.

Volunteer Project Lead May 2022 - May. 2024

Dalian Mother's English Consulting Co *Dalian, China*

- Developed a web app to store volunteer hours and training information for 50+ users in an relational database.
- Spearheaded weekly meetings to coordinate design, layout, and functionality of 20+ website pages.

Leadership

Competitive Programmer/Club Co-President May 2024 - Present

Georgia Tech Competitive Programming Club *Dalian, China*

- Peak Codeforces rating of 1961, higher than LLMs such as Claude, OpenAI O1, and Google Gemini.
- Leading weekly meetings/practices, covering topics from advanced data structures to elegant solving techniques.
- Participating in twice-weekly Codeforces competitions to practice for ICPC competitions.

Projects

iUtils Kernel Driver | *C, WDF, WinAPI, C#, WinUI 3* May 2024 - July 2024

- Created a Windows Kernel Driver utilizing USB sniffing to identify and enable hidden iDevice USB features.
- Utilized the Windows Driver Framework to create a virtual USB bus, allowing other drivers to extend device functionality out of the box.
- Developed a lightweight WinUI 3 C# app to allow users to configure enabled features and view device info.

Graphscii Graph Embedder | *NetworkX, Python, React.js* November 2023 - January 2024

- Implemented an orthogonal graph drawing framework with the Topology-Shape-Metrics approach, allowing users to display graphs in the terminal with ASCII and Unicode characters.
- Utilized network flow algorithms and MILP solvers to minimize edge crossings, bends, and total layout area.
- Developed a front-end and API for online demo use and documentation.

Daedalus Esoteric Programming Lang | *Rust, React.js, WebGL* July 2024 - August 2024

- Built a stack-machine based language involving image manipulation, parsing, interpreting, and execution.
- Utilized WebGL shaders, React.js and Web Assembly to create an interactive and performant web IDE to allow users to write, debug, execute, and run Daedalus code.

USACO Checklist App | *HTML, CSS, Python, Postman, SQL, Jekyll* May 2022 - June 2022

- Developed a REST API and utilized a relational database to track progress on 500+ USACO problems.
- Reverse engineered USACO server requests with Postman, wrote async web scraper to sync problem progress.
- Built JSON web token authentication and user login system to enable sharing and device sync.

Technical Skills

Programming Languages: Javascript, C++, C, Python, Java, Rust, SQL

Technologies: React.js, Flask, FastAPI, PyTorch, WDF, Bevy, Postman, GH Actions, NetworkX, ImGUI, LaTeX

Languages: English (fluent), Chinese (conversational)

Interests: Bouldering, Saxophone, Volleyball, League of Legends (Masters), Mechanical Keyboards