Raymond Bian

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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

Atlanta, Georgia

- Peak Codeforces rating of 1961, better 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