Jiayi Li

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Education

Brown University, MS in Computer Science — Sep 2024 – Exp: May 2026

- **Coursework:** Interactive Computer Graphics, Computer Graphics, Deep Learning

Boston University, BA in Computer Science and Statistics — Sep 2020 – Jan 2024

- **Coursework:** Collaborative Leadership, Analysis of Algorithms, Computational system, Software Engineering

Experience

UI/UX Design Intern, PCCW Global – Beijing, China — Mar 2024 – Jul 2024

- Conducted user research and competitive analysis to support product planning for two new features.
- Proposed 10+ product strategies by analyzing user performance data, directly influencing product roadmap.
- Collaborated cross-functionally with PMs, engineers, and UX designers, ensuring alignment across teams.
- Presented design proposals and findings to leadership, recognized for clear communication that bridged technical details with business goals.

Research Experience

Graduate Research Assistant – Generative AI, Brown University – Providence, RI — Sep 2024 – Present

- Leveraged multiple AI models to generate and process data, selecting tools for project needs and balancing trade-offs between accuracy, scalability, and development time.
- Collaborated closely with lab teammates, maintaining clear communication through regular meetings and progress reports to ensure alignment on research goals.
- Contributed to paper writing and presentations, translating technical results into clear insights for both academic and non-technical audiences.

Projects

Nature Werks: Real-Time Natural Environment Renderer — youtube.com/NatureWerk

- Collaborated in a team of 4 to design and implement a real-time natural environment renderer in OpenGL, featuring procedurally generated terrain, dynamic weather, sky rendering, and animated water effects.
- Assigned roles based on technical strengths of the teammates, maintained clear and timely communication throughout development, and coordinated the final merge of individual components.
- Balanced performance optimization with stakeholder requests, clearly communicating technical trade-offs, and aligning decisions with user experience goals.

Raft Consensus Implementation (Distributed Systems, Go)

- In-depth research on the Raft consensus algorithm was conducted to fully understand leader election, log replication, and fault tolerance before implementation.
- Implemented the protocol in Go, coordinating leader election, log replication, and system recovery to maintain distributed consistency.
- Evaluated trade-offs between desired features and time constraints, prioritizing critical functionality to deliver a reliable and efficient system.

Database Systems (SQL, MongoDB, XML)

- Built small-scale relational and non-relational databases to explore query optimization, schema design, and indexing strategies.

Skills

- **Languages:** C++, C, Java, Python, C#, SQL, JavaScript, Go, R
- **Technologies:** Qt Creator, OpenGL, VSCode, SQLite, XCode, Figma, RStudio