Christian Armstrong

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EDUCATION

Brown University | *A.B. Computer Science* ***Expected Graduation May 2025***

- QuestBridge Scholar: selected as one of 1,400 finalists nationwide to receive a full-ride scholarship for first-generation, low-income, high-achieving students.
- Won "Best First Time Hack" at Hack Harvard 2022, out of the 500 hackers, by developing an innovative browser game.
- **Relevant Coursework**: Computer Systems \ Software Engineering \ Computer Architecture \ Data Structures & Algorithms \ Cryptographic Systems

PROFESSIONAL EXPERIENCE

Brown University | *Teaching Assistant* *Dec 2022 – Present*

- Helped students understand proof-writing, logic, set theory, graph theory, combinatorics, and probability.
- Wrote and revised handouts, lecture slides, and supplemental material.

Full Stack @ Brown | *Product Manager* *Sep 2022 – Present*

- Currently leading a team of 4 to redesign Brown University's course review website used by 8,000+ students.
- Implemented GitHub project boards, git branches, weekly meetings, and a team Slack channel.
- Set up Firebase Authentication and Realtime Database.

EXTRACURRICULARS

Blockchain @ Brown | *Vice President* *Sep 2022 – Present*

- Organized recruiting events with Unstoppable Domains and Dexterity Capital.
- Coordinated panels with Ava Labs, Shima Capital, and Evernew Capital.

Brown Applied Computing | *Hackathon Coordinator* *Sep 2022 – Present*

- Arranged for the transportation and reimbursement of Brown University's Hackathon team (20 members).

PROJECTS

NFL Betting Web App *React, TypeScript, Java, CSS*

- Fetched, filtered, and sent JSON data through asynchronous REST API calls between internal and external servers.
- Dynamically updated a webpage based on the results of API calls, showing NFL matches for the current week, including their point/spread and money-line betting odds.

Search Engine *Python*

- Engineered a program that ranks XML pages based on keyword relevance and backlink authority.
- Implemented PageRank, Term Frequency, and Inverse Document Frequency algorithms.
- Sacrificed space efficiency for constant time search results through preprocessing.

Caching *C*

- Reduced the runtime of read and write system calls 100x by temporarily storing segments of files in DRAM before writing them back into the Hard Disk Drive.

Memory Allocation Debugger *C++*

- Wrote a debugger to catch common memory programming errors (e.g., freeing the same block twice, trying to allocate too much memory, etc.).

Connect 4 AI *ReasonML*

- Simulated artificial intelligence using the Minimax algorithm, observing 4 playable moves ahead.
- Reduced runtime by 450% through Alpha-Beta Pruning.

SKILLS & INTERESTS

Programming Languages: Python \ Java \ TypeScript \ HTML \ CSS \ JavaScript \ C \ C++

Frameworks & Libraries: React \ Firebase \ Docker \ Figma \ NumPy \ Node.js \ Unix \ Linux

Interests: Basketball \ Martial Arts \ Rock Climbing \ Podcasts \ Tea \ Rap \ Venture Capital \ Entrepreneurship