

Spencer Dearman

571-758-8292 | dearmanspencer@uchicago.edu | [linkedin.com/in/spencerdearman](https://www.linkedin.com/in/spencerdearman)

Education

The University of Chicago

B.S./M.S. in Computer Science, Computer Systems Specialization

Chicago, IL

Sep. 2022 – Jun. 2026

GPA: 3.6/4.0

Relevant Coursework: Introduction to Computer Science I/II (Object-Oriented Programming), Systems Programming I/II, Discrete Mathematics, Theory of Algorithms, Computer Architecture, Engineering for Ethics and Privacy, Foundations of Computer Networks, Machine Learning for Computer Systems*, Application Development*, Operating Systems*

Experience

Inflection

Chicago, IL

Quantum Software Engineering Intern

Jun. 2024 – Aug. 2024

- Studied concatenating QEC code combinations for neutral atom and ion-trap quantum computers using Azure Quantum Resource Estimator that reduce the number of qubits by 40% when conducting a preimage attack on SHA256 using Grover's algorithm
- Implemented and optimized GitHub actions workflows for server-side Superstaq, achieving a reduction in daily operational costs by 10% while maintaining full test coverage, therefore ensuring cost savings without compromising code quality or safety
- Collaborated with Sqorpius quantum computing hardware team to accurately assess Long-Range-Enhanced Surface Code requirements, guiding strategic decisions in SLM+AOD architecture development, reducing overall operational qubit usage
- Upgraded server-side Superstaq for compatibility with macOS version 14.0 and higher, enabling full functionality for all Mac users

University of Chicago Human-Robot Interaction Lab

Chicago, IL

Software Development Research Assistant

Apr. 2023 – Oct. 2023

- Utilized Python and NaoQi to create 10 new behaviors, 5 new movement patterns, and improved speech recognition speed by 20% in order to reduce conversation latency between study participants and the Nao V6 robot, achieving more fluid interactions
- Implemented Nao V6 robot visual recognition models, leading to a 15% reduction in robot action response time for e-stim
- Learned behavioral and technical research methods and applied analytical techniques to other research participant data

Projects

Adrenaline Recruiting iOS App

Jan. 2023 – Present

- Developing a native Swift mobile app for iOS, providing users with access to over 100,000 past dive meets, scores, results, as well as personal profile information, algorithm-based tools for creating optimal competition lists, and real-time results
- Utilizing Amplify and DynamoDB to enable cloud-based access to store meet data, profiles, and recruiting information, Lambda and Pinpoint for real-time messaging features, and Rekognition for identity verification and user security
- Certified Apple Developer targeting a user base of 40,000 domestically, all managed on GitHub using an agile workflow

chIRC Internet Relay Chat

Mar. 2024 – Jun. 2024

- Developed and implemented a robust IRC server in C capable of handling over 18 unique commands, private messaging, multi-user communications, and channel privileges. Tested using a python test suite to ensure IRC compliance
- Analyzed and interpreted RFC documentation to accurately implement IRC protocol features such as message formatting, command processing, and channel operations in order to maintain IRC industry standards within the server

Mininet IPv4 Router

Mar. 2024 – Jun. 2024

- Integrated and developed code in C to handle raw Ethernet frames, including sending and receiving ARP requests and replies, managing ARP cache, and processing pending ARP requests in a multi-threaded environment with mutex synchronization
- Designed and implemented support for ICMP Echo Requests/Replies, Destination Unreachable, and Time Exceeded messages and developed robust IP forwarding using a routing table with longest prefix matching, and dynamic ARP resolution
- Implemented functionalities based on RFC 792 (ICMP) and RFC 826 (ARP), ensuring compliance with standard protocols and conducted testing on various network topologies, including single, two, and three router configurations using Mininet

Technical Skills

Languages: C, Python, Java, Swift, R, React, Q#

Technologies/Frameworks: Git, AWS Amplify, AWS Lambda, AWS AppSync, S3, DynamoDB, Microsoft Azure

Spoken Languages: English, Spanish (Working Proficiency)

Extracurriculars & Interests

University of Chicago NCAA Diver

Sep. 2022 - Present

- UAA Men's Swimming and Diving Diver of the Year, 2x UAA conference champion, 2x D3 NCAA National Finalist