# Owen Thomas

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#### **EDUCATION**

### Tufts University, Medford, MA

Expected May 2025

Bachelor of Science in Computer Science and Religious Studies

GPA - 3.97, Dean's List all semesters, Susan Feigenbaum Memorial Prize in Judaic Studies

**Relevant Courses:** Intro to Computer Science, Data Structures, Machine Structure and Assembly Language Programming, Algorithms, Internet-scale Distributed Systems, Reasoning and Agents (taken at the University of Edinburgh), Intro to Security, Programming Languages, Calc III, Proof-based Discrete Math, Linear Algebra

#### **EXPERIENCE**

### JumboCode, Medford, MA

Full Stack Developer

September 2024 – Present

- Developing a web-app to collect feedback, store receipts, and process report cards for
  A2Empowerment, a nonprofit providing women in Cameroon with mentorship and scholarships
- Meet weekly with team for standup, code review, and project planning

### Tufts University Department of Computer Science, Medford, MA

Teaching Fellow/Teaching Assistant for Intro to Computer Science

September 2022 - Present

- Lead weekly lab sessions for 40+ students on C++ topics, such as loops, recursion, and pointers
- Conduct office hours 2 times/week, support students working through programming challenges, debugging code, and developing understanding of key topics
- Create and manage office hours schedule for 35+ TAs. Coordinate grading of HW and exams.

Co-Course Instructor for Teaching Computer Science

June 2024 - Present

- Teach mandatory course for new TAs in the CS department along with Professor
- Develop and execute a series of 2.5-hour long lectures on necessary skills to be a TA

Teaching Assistant for Internet-scale Distributed Systems

September 2024 – Present

- Teach students concepts about the design of the World Wide Web
- Hold office hours to debug TCP- and UDP-based distributed programming projects

#### **Applied Invention**, Cambridge, MA

Software Engineer Intern

*June 2024 – August 2024* 

- Developed tools in Rust for testing packet routing and internal commands for Zero-trust Packet Routing (ZPR), a project designed to make networks more secure
- Wrote Lua dissectors and used Wireshark to analyze packet traffic
- Wrote GitHub runners in YAML and pre-commit hooks in Bash to ensure correctness of code

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**Languages:** C, C++, Rust, Python, x86 Assembly, HTML, CSS, PDDL, Lua, Git, Scheme, JavaScript, **Software, Tools and Methods:** Wireshark, OOP, UDP and TCP/IP systems, GitHub, Linux, Netcat

## **PROJECTS**

## File Copy (C++)

- Implemented a UDP-based client/server program that copied all files in a source directory to a target directory on the server machine. Implemented an end-to-end check to ensure correctness
- Created original packet structure necessary for sending file information

### RPC (C++, Python)

- Created a Python program that generated C++ client and server files that perform Remote Procedure Calls of functions from a client to server given an IDL file
- Program TCP based transmission, supported functions involving arrays, strings, structs, chars, void functions, and integers, and any combination of those data types, included nested structs/arrays

## **Universal Virtual Machine (C)**

• Created a virtual Universal Turing Machine that had registers, memory segments, and a program counter and could execute programs with all 14 Universal Machine instructions