Matthew Finnegan
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EDUCATION

University of Massachusetts, Amherst
Manning College of Information and Computer Sciences — Amherst, MA
Bachelor of Science in Computer Science — *Expected, 2027*
- Cumulative GPA: 3.85, Dean's List all semesters
- **Relevant Coursework**: Data Structures, Algorithms, Computer Systems, Operating Systems, Programming Methodology, Network Security, Object Oriented Programming, Software Engineering, Linear Algebra, Discrete Math, Probability and Statistics, Calculus I & II, Physics

St. John's Preparatory School — Danvers, MA
GPA: 4.39 — *September 2016-May 2023*

PROJECTS

Unix Shell — *Fall 2025*
- Built a simplified command line shell supporting tokenization, parsing, and execution of user commands.
- Added support for pipelines (|), sequential execution (;), and built in commands (e.g., quit).
- Strengthened understanding of Linux commands, system calls (e.g., fork(), execvp(), dup2()), and process lifecycle.

Assembly Interpreter — *Fall 2025*
- Built an interpreter for a simplified x86-style assembly language with support for arithmetic, memory operations, stack management, and control flow.
- Implemented a virtual CPU with registers, memory segments, and program counter.
- Strengthened foundations for reverse engineering and systems programming.

DuckPond Notification Platform — *Spring 2025*
- Built a full-stack notification system in a Scrum-style team project sponsored by Duck Creek Technologies using Next.js, FastAPI, and MongoDB.
- Delivered core features: compose modal, inbox/sent/drafts, search & filters, user profiles and settings, and an AI assistant for autofill/drafting

SKILLS

Primary Languages: C, C++, Python, Assembly, JavaScript, TypeScript
Tools and Frameworks: Git, Bash, Linux, MongoDB

EXPERIENCE

Computer Crime Unit — District Attorney's Office Salem, MA
Digital Forensics Intern — *Summer 2025*
- Analyzed digital evidence, including mobile device data extraction using industry forensic tools (e.g., Cellebrite, GrayKey).
- Documented investigative workflows, strengthening understanding of digital evidence handling and chain of custody.

Hodgies Ice Cream — Amesbury, MA
Shift Lead — *May 2021-August 2025*
- Trained new staff while overseeing grill operations and ice cream production.
- Developed leadership and communication skills in a fast-paced setting.

ACTIVITIES & INTERESTS.

UMass Cybersecurity Club — Amherst, MA
Member — *Fall 2025-Present*
HackUMass — Amherst, MA
Participant — *Fall 2024*
UMass Ski and Board Club — Amherst, MA
Member — *September 2023-Present*