Peter C. Morganelli

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EDUCATION

Tufts University   **Medford, MA**
Bachelor of Science in Computer Science (BSCS)   *Expected: Spring 2027*
- **Relevant Coursework:** Machine Structure and Assembly Programming, Discrete Mathematics, Data Structures, Algorithms, Game Design
- Dean's List x4

EXPERIENCE

Full-Stack Developer Intern   **Medford, MA**
Launch   *September 2024 - Present*
- Developing a **full-stack** AI-powered website builder from scratch at a startup company, working on back and front end development
- Created an interface for end-users to customize **generated websites** (dragging and dropping website components, etc).
- Implement innovative solutions in a timely manner to enhance **user experience** and **functionality** while learning new technologies

Software Developer   **Medford, MA**
Tufts JumboCode   *October 2023 - Present*
- Developed a **full-stack** inventory website for a local Somerville theater with a group of **10+** developers
- Implemented data retrieval and submission functionalities by working on GET and POST API handlers using **TypeScript**, enhancing several **React** components, and styling them with **Tailwind**
- Facilitated user content management by designing a page that enables the user to upload images into a custom carousel, detailing item information such as name, description, and filter tags while using **Figma** for design prototyping
- Conducted **unit testing** for and **quality assurance** for **10+** components, ensuring **100%** functionality and reliability for the application

Data Structures Course Assistant | *C++*   **Medford, MA**
Tufts University   *September 2024 - Present*
- Evaluated and graded **100+** student submissions, assessing code **functionality**, **style**, **organization**, and **modularity**
- Held regular office hours to support **200+** students with homework assignments and course concepts
- Provided constructive feedback to **200+** students, facilitating their understanding and application of data structures principles
- Actively responded and endorsed **hundreds** of student programming questions and answers on the course Piazza forum page

Founder and Executive Director   **Medford, MA**
Tufts Leadership Training Institute (LTI)   *June 2024 - Present*
- Successfully recruited **10+** mentors for an intensive **8-week** mentorship program, ensuring a high-quality and organized experience
- Spearheaded all meetings, planning, funding, organization, room reservation, recruitment, and admission to the program
- Worked alongside **MIT LTI directors** to effectively establish a new student organization and abide by all guidelines of the program

PROJECTS

CodeClock | *React.js, AWS, EC2, mongoDB, Next.js, Tailwind, VSCode API*   **February 2025**
- Created a personalized **full-stack** VSCode Extension to allow Tufts CS students time how long they spend working on code assignments
- Developed for the JumboHack hackathon in two days using **React.js** and **Tailwind** on the frontend in a Next project

Universal Machine Emulator | C, KCachegrind**, GitHub   **November 2024**
- Engineered a program that **emulates** virtual machine code with segmented memory and dynamic allocation in **C**
- Handles programs using **32-bit** registers, taking in **14** different bit-packed instructions and running them as pseudo-programs
- Learned how to use **KCachegrind** as a profiling tool to find optimizations for the program to handle **millions** of inputs within seconds
- Optimized the program by reducing runtime by **98%** on a dataset of **millions** of instructions

Image Compressor + Decompressor | *C*   **October 2024**
- Designed and implemented a program achieving over **40% reduction** in image file sizes using lossy compression and decompression
- Enhanced storage efficiency by **50%** using a bit-packing algorithm which optimized memory usage but preserved image quality
- Demonstrated programming expertise by debugging **hundreds** of lines of complex C code and gaining experience with large-scale projects

SKILLS

Languages: C++, C, Python, C#, JavaScript, TypeScript, x86 Assembly
Frameworks: React, Next.js, Node.js, ThreeJS
Tools: Git, Figma, Unity, Unix