Makarios Mansour

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Available: July – December 2025

Education

Northeastern University – Boston, MA   *Graduation: May 2026*
Candidate for Bachelor of Science in Computer Science, Minor in Computer Engineering
- ❖ **Honors:** GPA: 3.98/4.00 | University Honors Program | Dean's List
- ❖ **Coursework:** Computer Systems, Digital Design and Computer Organization, Networks Fundamentals, Systems Security, Object-Oriented Design, Algorithms and Data Structures, Discrete Structures, Database Design

Skills

- ❖ **Programming:** C++, C, Java, Python, SQL, JavaScript, TypeScript, CSS, Git, HTML, React.js, Arduino, JUnit,
- ❖ **Applications:** Gitlab, GitHub, VSCode, PyCharm, WebStorm, Microsoft Office, Google Suites

Work Experience

MORSE Corp – Boston, MA   *July 2025 – Present*
Software Engineer Co-op
- ❖ Implemented new backend features and refined legacy features in Python and automated data processing to align with customer requirements on a data management web application
- ❖ Cooperated with HCI to implement and enhance new/existing frontend components to improve user experience
- ❖ Improved backend pipeline performance by 75% and developed new end-to-end test suite for frontend pipeline
- ❖ Communicated directly with customers to create Python scripts for specific use cases of large data management

Fresenius Medical Care – Boston, MA   *July 2024 – April 2025*
Software Engineer Co-op
- ❖ Developed and optimized embedded software in C/C++, improving hardware driver performance and system reliability while adhering to FDA coding guidelines
- ❖ Authored Python scripts to test requirements, wrote six workflows defining hardware action sequences, and resolved ~10 defects, enhancing machine functionality and system stability
- ❖ Created comprehensive System Design Documents, implemented rigorous testing protocols, and collaborated in an Agile environment to ensure FDA compliance and deliver high-quality solutions on time

Landmark Group – Cairo, Egypt   *May 2023 – August 2023*
Software Development Intern
- ❖ Implemented Oracle Warehouse Management System with Tata Consultancy Services using JavaScript and Java
- ❖ Applied a new system in the warehouse, achieving 90% alignment with operational requirements

Projects

Hazzat Generator   *January 2025 – Present*
- ❖ Assembled and organized a structured dataset of hymn recordings, Coptic transcriptions, and corresponding hazzat annotations for machine learning model training
- ❖ Used Label Studio and Pandas to preprocess and align multi-modal data for Transformer models

Password Manager   *March 2024 – January 2025*
- ❖ Constructed a password manager with multi-threaded key-value storage, using monitor pattern for thread safety
- ❖ Building an API to manage HTTP requests from frontend to aggregate passwords from the key-value store
- ❖ Utilized a C backend in conjunction with React.js, CSS, and HTML for the frontend interface

Personal Website   *January 2024 – January 2025*
- ❖ Designed and built a full-stack website to showcase coding projects and personal information
- ❖ Learned JavaScript, CSS, HTML, React.js through the development of this project

Extracurricular Involvement

NU SEDS Rover Team, Software Developer   *January 2024 – Present*
- ❖ Engaged in weekly work sessions, leveraging Python and C++ to resolve software tickets
- ❖ Contributed to firmware development for life detection, showcasing technical proficiency and teamwork

Coptic Orthodox Student Fellowship, President   *September 2022 – Present*
- ❖ Submitted budget proposals to finance club events for the Coptic Orthodox society in Boston
- ❖ Planned events throughout the year with the E-board under the guidance of the priest