# Michael Khoury *Computer Engineering Student*

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## EDUCATION

**Bachelor of Engineering (Co-op) - Computer Engineering, Class of 2027,** St. John's, Canada
*Memorial University of Newfoundland*
Fourth Year, Academic Term 6, GPA: 3.88 / 4.00 (Cumulative), 4.00 / 4.00 (Current)
**Relevant Courses:** Algorithms, Data Structures, Digital Logic, Foundations of C++, Introduction to Python, Microprocessors, Software Design

## SKILLS

**Languages & Scripting:** Python, C/C++, C#, VHDL, JavaScript, HTML, CSS, SQL, YAML, UML, JSON, XML, Bash, Dafny, Assembly, MATLAB

**Frameworks & Libraries:** React.js, Node.js, Express.js, .NET, Unity, PyTorch, NumPy, Pandas, Matplotlib, MLFlow, openpyxl, JSX, OpenCV

**Tools:** Git/GitHub, Jira/Bitbucket, Notion, Confluence, VS Code, Google CoLab, Quartus, MongoDB, Conda, Zapier, Shell/SSH, WinSCP, PuTTY

**Technologies:** REST API, Embedded & Real-time Systems, Signal & Image Processing, AI/ML, Linux, SDR, GNU Radio, Simulink, OOP, DSA

## RELEVANT EXPERIENCE

**Computer Engineering Intern (Co-op),** *C-CORE* May 2025 – Aug 2025 | St. John's, Canada
- Designed and trained ML models using Python and PyTorch for radar-based target detection, achieving over 85% detection accuracy.
- Developed signal processing algorithms and SDR workflows (Python, C++, VHDL, and GNU Radio), improving detection reliability by 12%.
- Optimized embedded systems to boost range by 20% and enhance SNR via system-level tuning and custom VHDL/embedded C++ modules.

**Supplemental Instruction (SI) Leader - ECE (Co-op),** Sep 2024 – Dec 2024 | St. John's, Canada
*Faculty of Engineering and Applied Science, Memorial University of Newfoundland*
- Led weekly SI sessions for 6 engineering courses, simplifying C++, Python, digital logic, circuits, and semiconductor physics for 40+ ECE students, boosting performance by 25% through clear communication and problem-solving.
- Automated administrative tasks by building a Python-based attendance tracker with Excel integration using pandas and openpyxl, increasing efficiency and ensuring 100% data accuracy.

**Machine Learning Software Developer,** *Visual and Analytic Computing Lab* Jun 2024 – Aug 2024 | St. John's, Canada (Hybrid)
- Trained ML algorithms in Python for disease recognition in medical images using PyTorch and MLflow; executed models via Bash scripting through PuTTY, with GitHub repositories managed via WinSCP and results tracked on MLflow, achieving a 15% performance improvement.
- Developed a Python script to automate experiment tracking using Data Version Control and YAML configuration editing, improving workflow reproducibility and version control consistency by 30%.

**AI Automation Developer (Co-op),** *NL Eats Community Outreach Inc.* Jan 2024 – Apr 2024 | St. John's, Canada (Remote)
- Led 5+ workflow automation projects through AI integration using Zapier, resulting in improved efficiency and resource management.
- Utilized the OpenAI API to efficiently integrate AI into various work applications, improving workflow automation and system compatibility

**Engineering Co-op Student (Data Analysis),** *Vale Canada Ltd.* May 2023 – Aug 2023 | Long Harbour, Canada
- Created preventative maintenance plans using SAP ECC, boosting equipment uptime by 15% and reporting regularly to the engineering team.
- Analyzed machine data and part costs in Excel/PowerPoint to ensure 100% accuracy and reduce unnecessary spending by 15%.

## RELEVANT PROJECTS

**Full-Stack Portfolio Website,** *Personal Project* May 2025 – Jun 2025
- Built a fully responsive portfolio site using React.js (with JSX), React Router, and custom CSS with scroll-aware navigation, fade-in animations, mobile-optimized layout, and modular UI components.
- Developed and deployed a Node.js/Express.js REST API to handle secure contact form submissions via Nodemailer, with optional MongoDB/Mongoose integration; frontend deployed via GitHub Pages and backend via Render.

**Unity Tower Defense Game (ZSM Defense),** *Software Design Course* Jan 2025 – Apr 2025
- Built a polished 2D tower defense game in Unity with C#, featuring an endless wave system, unique enemy behaviors, and tower abilities like splash damage, burn effects, and curses. Recognized as one of the top 2 projects in the course for gameplay, architecture, and user experience.

**Car UI and Proximity Sensor,** *Introduction to Programming Course* Sep 2022 – Dec 2022
- Used Python and Arduino for designing a UI mimicking modern car features with an advanced built-in promiximity sensor system.

## AWARDS

**The IUGS Entrance Scholarship,** *Memorial University of Newfoundland* 2022

**Class of 2021 High School Valedictorian,** *The English Modern School, Doha* 2021