Dylan Garner

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Education

McMaster University Hamilton, ON
Bachelor of Engineering - Software Engineering *GPA: 3.93/4.0 | Sept. 2021 – April 2026*

Experience

Machine Learning Engineer Intern May 2025 – August 2025
Shopify *Toronto, ON*

- Optimized training pipeline for generative recommender transformer model, achieving 5% reduction in training time from 24 hours, resulting in significant cost savings on 128 A100 GPU cluster infrastructure.
- Developed and deployed uplift modeling system to personalize upgrade plan recommendations, improving paid-plan conversion rates by 2% with estimated revenue impact of $1M+ before year-end.
- Implemented causal inference techniques and A/B testing frameworks to validate model performance and measure incremental lift across diverse user segments.

Software Engineering Intern - Machine Learning May 2024 – April 2025
Evertz Microsystems *Burlington, ON*

- Developed and trained Faster R-CNN and YOLO object detection models using PyTorch, achieving 75% improvement in real-time inference for broadcasting environments.
- Integrated computer vision models with OpenCV for precise 2D to 3D camera calibration, enabling real-time tracking of moving objects in dynamic sports broadcasting.
- Leveraged Structure-From-Motion and feature detection techniques for 3D scene reconstruction and collaborated with cross-functional teams to design scalable, low-latency systems.
- Product demoed as key feature at International Broadcasting Convention (IBC) 2024 and National Association of Broadcasters (NAB) 2025.

Software Team Lead / Vice President | macexo.com November 2024 – Present
McMaster Exoskeleton *Hamilton, ON*

- Leading team of 15 developers building a robotic lower limb exoskeleton with embedded control systems and real-time safety mechanisms.
- Designing and training gait prediction models using sensor fusion and time-series analysis to predict and assist human movement patterns.
- Implementing CI/CD pipelines and automated testing frameworks to ensure robust code quality and streamlined development.

Software Engineering Intern - Full Stack May 2023 – August 2023
Evertz Microsystems *Burlington, ON*

- Built front-end web applications using React and Redux, improving client productivity by up to 50% through real-time feature deployment.
- Increased end-to-end testing speeds by 80% using Cypress and CucumberJS, and created a no-code GUI tool for non-developers to author automated tests, reducing validation time by 50%.

Projects

Hush - Secure Messaging App | *Flask, React Native, Firebase, AES-256* | github March 2024

- Built secure messaging app with AES-256 encryption, React Native UI, and Flask server handling asynchronous encryption/decryption for concurrent user sessions with real-time performance.

Technical Skills

Languages: Python, Java, C/C++, SQL, JavaScript/TypeScript, Bash, Go
Machine Learning & AI: PyTorch, TensorFlow, Scikit-learn, OpenCV, NumPy, Pandas, Transformers, YOLO
MLOps & Infrastructure: A/B Testing, Model Training Optimization, GPU Computing, Uplift Modeling, CUDA
Web Development: React, Redux, Node.js, Flask, NextJS, Tailwind, HTML/CSS
Developer Tools: Git, Docker, Jenkins, Linux, Firebase, Cypress, Selenium, CI/CD