Marcus Eshleman

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Summary

I'm a fourth-year Computer Engineering student specializing in software, with full-stack development experience through internships and academic research. With hands-on experience in scalable data infrastructure, backend architecture, and applied machine learning, and I'm currently seeking a 4–8-month Software Engineering internship.

Education

University of Alberta - Edmonton, Alberta
Computer Engineering, Software Specialization BSc. Co-op, **Apr 2028**

Relevant Courses: Object-Oriented Software Design, Intelligent Systems, Computer Architecture, Operating Systems

Technical Skills

- **Programming**: Python, C/C++, Java, HTML, CSS, Assembly, VHDL, SQL
- **Technologies**: Git, Linux, OpenCV, TensorFlow, ScikitLearn, Databricks, Django, AWS, Tableau, JUnit, Pytest

Work Experience

AltaML – Edmonton, AB **Jan 2026 – Apr 2026**

Machine Learning Developer Intern (Incoming)

Drivewyze – Edmonton, AB **Jan 2025 – Aug 2025**

Software Engineering Intern

- Optimized primary reporting pipeline in Databricks, cutting execution time by 55% via improved Spark transformations and query logic, which resulted in annual cost savings of ~$12,000
- Implemented the ORM layer for a new Django service by extending existing models to support custom functionality
- Collaborated closely with QA teams to design and implement automation and unit tests, enhancing code coverage, ensuring reliability, and streamlining the testing process

Alberta Biodiversity Monitoring Institute – Edmonton, AB **May 2024 – Aug 2024**

Software Engineering Intern

- Integrated front-end applications with RESTful API endpoints for dynamic data fetching
- Partnered closely with UX/UI designers to translate wireframes and mock-ups into responsive, accessible, and high-quality front-end code

Projects

Aerial Payload Delivery System – Personal Project **Jun 2025 – Present**

- Developed an autonomous aerial payload delivery system prototype in C++ using OpenCV for the 2026 SAE Aero Design competition
- Implemented computer vision algorithms to detect and track designated drop zones in real-time
- Integrated telemetry data to dynamically adjust flight path and optimize delivery accuracy

Laser Simulation Environment – Faculty Research **Sept 2023 – Apr 2024**

- Developed a Python simulation environment used in faculty research to model the laser heating of various surfaces
- Simulated thermal changes over time using partial differential equations and the diffusion equation, and visualized results through real-time animation with Matplotlib

Extra Curricular

UAlberta Aero Design Club

Software Lead, VP Finance **June 2025 – Present**

- Leading a team to develop custom autonomous flight software using Python, C++ and OpenCV for the control of a VTOL UAV competing in the 2026 SAE Aero Design competition in Fort Worth, Texas
- Managing funding acquisition, budgeting, and faculty/sponsor correspondence