

# EVAN RICHARDSON

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## Professional Summary

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Interdisciplinary engineering graduate with 2+ years of hands-on internship experience delivering production software, data pipelines, and technical documentation. Passionate about the transformative power of data and AI/ML in complex engineering problems.

## Education

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### University of British Columbia

May 2025

*Bachelor of Applied Science in Integrated Engineering, GPA: 3.8/4.0*

*Vancouver, BC*

- Focus in Computer Engineering and Mechanical Engineering.
- Relevant Coursework: Deep Learning, Applied Machine Learning, System Software Construction, Data Structures and Algorithms, Digital Systems and Microcomputers, Applied Electromechanics, Computational Fluid Dynamics.

## Work Experience

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### Pratt and Whitney Canada

Sep 2023 – Sep 2024

*Software Engineering Intern*

*Longueuil, QC*

- Overhauled AWS Lambda functions, resulting in a 300% increase in processing speed and accommodating expanded metric requirements and updated data formats.
- Participated in the design and implementation of a cloud infrastructure using AWS (MSK, Kafka, Lambda, S3, EC2) and Databricks, streamlining engine data analytics and contributing to a 20% reduction in operational costs
- Championed living in-code documentation using Sphinx Autodoc integrated with CI/CD pipelines, accelerating onboarding of new employees and interns.
- Designed and executed a comprehensive tiered testing framework encompassing unit, functional, and end-to-end tests for AWS Step Functions

### Lambton College Applied Research

Jun 2023 – Jan 2024

*Game Developer*

*Remote, Part-time*

- Participated in an Agile team building an educational video game for the Aamjinwaang First Nation
- Developed core interaction and menu systems using C++ scripting and UE5 blueprints.

### Milestone Environmental Contracting

May 2022 – Sep 2022

*Project Coordinator*

*Langley, BC*

- Developed Quality Control Plans (QCP) for \$5M mine remediation work packages, championing a custom PowerApps solution for on-site data capture.
- Analyzed and reported water-quality data, leveraging Power Automate, Excel, and VBA to automatically generate and distribute stakeholder emails.

## Technical Skills and Projects

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### MuraLine | *Java, C++, Robotics*

May 2025

- Co-developed Muraline, a cable-driven robot system that streamlines mural creation by painting artists' SVG outlines onto large walls, reducing time, cost, and technical barriers.
- Led software and firmware development, adapting Marlin Firmware (C++) and developing a Java desktop app for processing SVG files, smoothed path planning, and custom GCODE generation.

### Class-Conditional PixelCNN++ | *Python, Pytorch*

May 2025

- Adapted and implemented a Conditional PixelCNN++ model (PyTorch) for class-conditional image generation and classification, incorporating Feature-wise Linear Modulation (FiLM) and direct fusion techniques to achieve 85.16% accuracy and 24.48 FID.

### AI-Powered Resume Chatbot | *Python, LLM, Cloud, RAG*

Dec 2024

- Engineered a Llama 3 8B RAG chatbot on Modal, leveraging Python, TensorRT-LLM (FP8 quantization) for accelerated inference, Sentence Transformers for embeddings, and FAISS for an indexed knowledge base from local documents, showcasing end-to-end AI application development with LLM optimization and cloud deployment