

NATHAN PANNELL

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EDUCATION

University of Victoria | Victoria, BC
B.Sc. **Computer Science** with Business Minor
– President's Scholarship

Sept 2021 – Present
Expected: Dec 2025

SKILLS

AI & Data Science: NumPy, Pandas, Matplotlib, Scikit-Learn, OpenAI API, LLMs
Programming & Development: Python, SQL, Git, REST APIs, Flask, React

AI RESEARCH & LEADERSHIP

President

UVic AI | *Student-Run Research Club*

Jan 2024 – Present
Victoria, BC

- Led development of **reinforcement learning-based** wildfire simulation research, **published** at **CUCAI**.
- Implemented **convolutional model** achieving **80%** success rate in wildfire containment prediction.
- Conducted technical workshops on **Large Language Models** (LLMs) and practical machine learning applications.
- Managed cross-functional teams for AI projects, including data visualization and model deployment.

MACHINE LEARNING PROJECTS

Wildfire Simulation with AI Agents (Research Paper) | NumPy, OpenAI Gym, Pandas, Matplotlib Feb 2024 – April 2024

- Architected a **reinforcement learning** environment using **OpenAI Gym** for training autonomous firefighting agents.
- Designed custom **neural network architecture** with convolutional layers, achieving **80%** prediction accuracy.
- Published novel approach integrating active agents within wildfire simulation environments.

WORK EXPERIENCE

Software Engineer Co-op

BC Investment Management (BCI) | *Institutional Investor*

Sep 2024 – Dec 2024
Victoria, BC

- Developed enterprise applications using **SQL Server**, sped up by **66%** through optimized stored procedures.
- Created and maintained technical documentation using **Confluence** and **Jira** in an **Agile** environment.
- Achieved **10x** frontend performance improvement through database architectural optimizations.
- Established **Power Platform** best practices and component libraries, leading enterprise-wide adoption.
- Built automated workflows with **Power Automate** and **SQL Server** to streamline financial data processing.

Talent Technology Integration Co-op

Teck Resources Ltd | *International Mining & Exploration*

May 2024 – Aug 2024
Vancouver, BC

- Developed **Python**-based solutions and **REST APIs** to automate application communication and improve data workflows.
- Built leadership reports using **Power BI** and **SQL** to improve KPI accuracy by **30%**.
- Improved user onboarding efficiency by **80%** by leading a **ServiceNow** integration project.
- Managed and optimized a suite of **18** talent acquisition applications, resulting in a **50%** increase in recruiting efficiency.