

Ying Wan

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EDUCATION

University of Alberta, Edmonton AB

Expected Graduation: April 2025

BSc in Computer Engineering, Software Option, Co-op

Cumulative GPA: 3.4/4.0

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL, C++, Rust, JavaScript, HTML/CSS, MATLAB

Tools and IDEs: Visual Studios Code, JetBrains IDEs / Android Studios, GitHub, UTM/VirtualBox/VMware

Other: Atlassian, Microsoft Office, Google Suite

WORK EXPERIENCE

Data Science Intern

May 2024 – Present

PulseMedica Corporation

- Developed a classifier to detect eye laterality in retinal images with **97%** accuracy on a validation set, utilizing **OpenCV** preprocessing, **PyTorch** model architectures, **Tensorboard** logging, and **Captum** explainable AI metrics.
- Developed an autoencoder using adversarial training to denoise medical images, using **PyTorch**, and **Tensorboard**
- Modelled objects within a 3-dimensional volume using **Sklearn**, meshing methods, and **Plotly** visualizations.

Process Analyst Co-op

January 2023 – December 2023

Teck Resources Limited

- Leveraged **Python**, **Pandas**, **Plotly**, and **Streamlit** dashboards to design and implement customized KPIs, enabling monitoring of advanced process control performance and project progression.
- Converted machine learning models from **Python** to **MATLAB** for use in operational technology systems.
- Extracted and executed queries on datasets within **Databricks** using **PySpark**, enabling informed decision-making.
- Automated KPI PowerPoint creation using **Python** to streamline handoff processes and expedite distribution.

Automation Researcher

September 2021 - August 2022

Hussein Lab, University of Alberta

- Automated target controls for laser-induced breakdown spectroscopy experiments, boosting data collection efficiency by over **10** times and completing the initial project a month ahead of schedule.
- Programmed motion controls for a **2**-axes ball screw stage using **Python OOP** that interfaced with a **Raspberry Pi**.
- Developed user interfacing through a **PyQt** based **GUI** to control **1** and **2** linear actuators connected to a NewPort XPS.
- Received a 4-month NSERC Undergraduate Student Research Award and a 8-month Dean's Research Award.

PROJECTS

Inventory Android App | github.com/CMPUT301F23T02/StressOverflow

September 2023 - December 2023

Led a team of **5** to build a **Java** based **Android** application that recorded items with **Firestore** connection and barcode scanning.

Employee Retention Prediction | <https://ying-sunwan-employee-retention-prediction.streamlit.app/>

May 2023

Analyzed and applied machine learning models to a HR dataset using **Python Pandas**, **Plotly**, and **Streamlit** to predict employee retention. Completed as part of the Advanced Data Analytics course with Google Coursera.

Hussein Lab Website | https://ying-sunwan.github.io/Hussein_Lab/

March 2022 - August 2022

Co-developed a website to display lab projects, news, and team members using **React**, **JavaScript**, and **CSS**.

SERVICE

Co-Lead Education

July 2024 – Present

Artificial Intelligence in Medical Systems Society

VP Academics

May 2024 – Present

Computer Engineering Club

Director of Design (2021-2022), Director of High School Outreach (2022-2023)

April 2021 – April 2023

University of Alberta Women in Science and Engineering

VP Logistics

April 2022 – September 2022

UAlberta Future Creators

Design Team Lead (2021-2022), Co-President (2021-2022)

January 2021 – September 2022

UAlberta Art Club