Ming Chun Wei

jimwei6@cs.toronto.edu | linkedin.com/in/jimweiubc

Education

University of Toronto — Toronto, ON
MSc in Applied Computing, Artificial Intelligence — *Sept 2024 – Dec 2025*

- Ongoing Courses: Geometric Deep Learning (CSC2545H) and Imitation Learning for Robotics (CSC2626H)

The University of British Columbia — Vancouver, BC
BSc in Computer Science, GPA 88.6 out of 100 — *Sept 2019 – May 2024*

- Graduated with distinction
- Specialized and excelled in Machine Learning and Artificial Intelligence coursework
- Received J Fred Muir Memorial Scholarship in Science from the recommendation of the Faculty of Science

Waseda University — Tokyo, Japan
School of International Liberal Studies, GPA 3.83 out of 4.0 — *Sept 2023 – Feb 2024*

- Received Walter H Gage and Elsie M Harvey Education Abroad Scholarship

Projects

Field Area Segmentation | *Python, PyTorch, OpenCV, Mask-RCNN* — May 2024 – Aug 2024

- As a team of 2 developers, ranked 14 out of 64 in competition for using machine learning to segment field areas in 12 band satellite images
- Trained and fine-tuned Mask-RCNN models, improved final score by 0.11 through data augmentation and slicing aided hyper inference
- Worked around limited processing power by prepossessing image data in CPU RAM and converting to GPU only when required, reducing the time to train by 50% and enabled extra memory for batching and larger models

Twitter Reviews Topic Modeling | *Python, pandas, BERTopic, gensim* — Jan 2024 – Feb 2024

- Conducted analysis of Twitter Play Store reviews using LDA and BERTopic topic modeling for project in Social Media and Data Analysis course, discovered traces of company scandals and controversies within reviews

Image Denoising Survey | *Python, pandas, PyTorch, NumPy, OpenCV* — Jan 2024 – Feb 2024

- Trained and compared AutoEncoder, Unet, and DnCNN architectures on de-noising random Gaussian noise in images for the final project of Advanced Data Science course

Face Mask Image Classification | *Python, pandas, PyTorch, NumPy, OpenCV* — Nov 2023 – Dec 2023

- Midterm project for coursek in Advanced Data Science training and comparing SIFT based Logistic Regression and Multi-Layer Perceptron (MLP) with pixel-based MLP and Convolutional Neural Network on the task of face mask classification

Company Fraud Detection | *R, tidyverse*

- Worked in a team of 4 for the final project of intro to data science coursework to build a K-nearest neighbors model on the task of detecting company fraud based on audit data

Experience

Full-Stack Developer — Jan 2021 – Present
Hypatia Systems — *New Westminster, BC*

- Drove the launch of Hypatia Learn, a mathematical education service with automatic question generation, assignment marking, and personalized report cards
- Built assignment management interface allowing teachers to create and modify each assignment through utilizing existing templates and public library, reducing time required to create an assignment by 50%
- Constructed and executed database wide migrations to address rapidly changing business needs in a startup
- Implemented invitation system using Oauth 2.0, enabling authorized third parties to create questions for use in external contexts such as e-books or websites
- Designed editing lock system for questions with version validation to prevent the loss of question data from internet connection issues and simultaneous editing by multiple teachers

- Developed internal dashboards and mail subscription tools summarizing user registration and answering statistics to help board members monitor application growth and make data informed decisions
- Built automatic student report and activity dashboard by cleaning and processing student answer data with SQL, allowing teachers to easily monitor student performance identify areas of improvement

Undergraduate Teaching Assistant in ML and SE Sept 2022 – June 2023

The University of British Columbia *Vancouver, BC*

- Supported more than 100 of students in software engineering and applied machine learning courses by leading office hours, labs, and monitoring online QA forums
- Led weekly agile meetings for student project teams, guided teams on technical design, project management, and resolving team conflicts

Programmer Analyst Intern Jan 2022 – Sept 2022

The University of British Columbia *Vancouver, BC*

- Led the investigation and data recovery of a 4GB database data loss that occurred due to a loophole in legacy code by tracing HTTP requests and examining server logs
- Refactored legacy code that caused inconsistent results in user drop-downs due to race conditions by simplifying request logic and migrating legacy code to React; ensured 100% consistency and reduced loading time
- Constructed scripts to automate the initialization of virtual machines along with the configuration of a Tomcat server and database; eliminated the need for manual intervention and increased on boarding productivity by 25%
- Coordinated migration of deprecating API layer, allowing the Teaching Tracking and Payment System to continue to receive payroll data from Workday

Skills

Languages: JavaScript, Python, Java, TypeScript, SQL, HTML, CSS
Technologies: Git, SVN, Node.js, Express, React
Libraries: pandas, NumPy, scikit-learn, PyTorch, OpenCV