



# Marius Makoto Shepherd

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## SKILLS

**Languages:** HTML, CSS, Javascript, Java, C++, R, Python

**Platforms:** Unity, IntelliJ, VSCode

**Frameworks:** React, React Native

**Other:** Git, npm, ShaderLab

**Backend:** Node.js, PostgreSQL, Unix, Express.js

## TECHNICAL PROJECTS

### [RecallApp](#), OpenCV, React Native, SQL, Flask, Python

- ❖ With three other group members, created a mobile application called Recall for nwHacks 2023, Western Canada's largest hackathon, competing with 670 students.
- ❖ Responsible for backend architecture, deploying an **OpenCV** image similarity program.
- ❖ Worked with group mates to connect a SQL database and **OpenCV** to frontend **React Native** application by creating an API with **Flask**.
- ❖ Application takes real-time camera footage and compares existing images in the database with OpenCV and outputs if a person is registered in the database by the user, aimed to assist family members with dementia.

### [Learn-JSL](#), HTML, CSS, Javascript

- ❖ Created a website to learn the Japan Sign Language alphabet through machine learning models with Tensorflow.
- ❖ Original object detection model detects sign language through webcam and outputs to user with high accuracy.
- ❖ Deployed the object detection models as a web application from scratch with **Javascript**, **HTML** and **CSS**.
- ❖ Gained experience on deploying attractive, interactive, and robust websites and implementing APIs.

### [RecognitionBrain](#), React, Node.js, Express.js, PostgreSQL, RESTful API

- ❖ Developed a full stack web application on React using a machine learning API, detecting explicit elements within an image.
- ❖ Connected an **SQL database**, frontend with **React**, and backend with **Express.js** and **Node.js**.
- ❖ Created user authentication, sign-in and a ranking system, and created a secure password database.

### [ReactionSpeedDot](#), OOP, Java, Git

- ❖ Developed a full Java application to test reaction speeds with IntelliJ.
- ❖ Demonstrated use of **Git**, **Java**, **OOP**, and extensive testing and code coverage with JUnit.

## WORK EXPERIENCE

### Undergraduate Teaching Assistant, CPSC 110, UBC

- ❖ Current Teaching Assistant for a systematic and fundamental programming course, a core course for all UBC Computer Science students.
- ❖ Invigilated labs with **50+ students** and helped instruct lectures with over **250+ attendance**.

### Line Cook, Gooseneck Hospitalities

- ❖ Current line cooks at a local sports bar, providing meals for more than 200 people a night, working 25 hours a week.
- ❖ Demonstrated efficiency, communication with coworkers and hospitality in a fast-paced environment.

### Language Data Analyst, DataForce Vancouver

- ❖ Worked with a small data entry team to provide quality data for speech, text and image recognition, and human-machine interaction related to languages.
- ❖ Demonstrated ability to collaborate with a team of workers for providing quality datasets for ML engineers.

### Math Learning Center, Trinity College School

- ❖ Tutored AP Calculus, Statistics and Computer Science to students as a member of the school learning center.
- ❖ Earned AP Scholar status in AP Computer Science Principles, AP Chemistry, AP Physics 1 and 2.

## EDUCATION

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**University of British Columbia**

**Sept 2022 – May 2027**

*Bachelor of Science, Combined Major in Mathematics and Computer Science*

- Computer Science Student Association; Casual Baseball Club; 4.10 GPA; Dean's Honour List; nwHacks;