

# Annika Logarta

alogarta@uwaterloo.ca

<https://alogarta.tech/>

 [annikalogarta](#)  [annikalogarta](#)

## EDUCATION

University of Waterloo | Candidate for BSc in Computer Engineering - 3.8 CGPA

Sep 2023 – Apr 2027

## SKILLS

**Languages:** C/C++, Java, Python, Javascript, Simulink/MATLAB

**Hardware:** STM32, ESP32, Raspberry Pi, Jetson Nano, soldering, oscilloscope

**Tools:** Altium, KiCad, LTSpice, Git, OpenCV, Keras, Jupyter Notebook, Google Colab, React, Three.js, Node.js

**Protocols:** I2C, UART

## PROJECTS

Vital Watch | STM32, C, I2C, USART, FreeRTOS

- Created a wearable device to gather and store vital sign data via **FreeRTOS**
- Developed C code for **STM32**, transmitting sensor data to display on an LCD via **I2C** and on a computer via **USART**

Moodify | Python, Keras, Matplotlib

- Trained a **neural network** utilizing **Keras** to identify human faces from photo input with 96% accuracy
- Classified faces into 6 basic human emotions with **53% accuracy** through fine-tuning batch sizes and epoch numbers

KuMahjong | Vite, React, Tailwind, Axios, Javascript

- Designed and created a Mahjong website with **React** and **Tailwind** with modified mechanics to gamify memorization
- Leveraged **Axios** to make HTTP requests to enable dynamic rendering, ensuring accurate gameplay between 4 players

## EXPERIENCE

**Data Scientist Intern** | Marimetrics Technologies Inc. – Remote

Jan 2024 – Present

- Reviewing research papers, conducting **thorough analysis** of theory behind certain **optically based** water quality measurements
- Developing and testing prototype functions to simplify **data conversion processes** for embedded devices
- Designing machine learning algorithms using **MATLAB** to identify patterns and trends within sensor datasets
- Wrote standardized documentation to streamline testing procedures for internal use

**Hardware Core Member** | Midnight Sun Solar Rayce Car Team – Waterloo, ON

Sep 2023 – Present

- Researched for appropriate **MOSFETs** and **optoisolators** to incorporate into schematics
- Utilized **Altium** to design battery management system (BMS) carrier schematics for the car's electric battery
- Simulated PMOS turn-on characteristics in **LTSpice** and implemented a **slow-rate limiter** to reduce inrush current
- Calibrated MPPTs by scaling the solar input voltage to the internal ADC range to ensure accurate measurements

**Web Developer Contractor** | Independent – Remote

Jul 2020 – Dec 2020

- Developed and maintained **websites** for local businesses to help maintain an online presence during the pandemic
- Utilized **HTML**, **CSS**, and **Javascript**, and guided clients through purchasing domains and web hosting servers

## EXTRACURRICULARS

**Math Team** – Burnaby, BC

Jun 2014 – Jun 2023

- Wrote math contests, and achieved awards such as **Hypatia School Champion** (Apr 2022) & **Euclid Honours** (Apr 2023)
- Chosen as one of the 60 national participants for the 2022 Lloyd Auckland Invitational, hosted by CEMC and UWaterloo

## INTERESTS

- Photography
- PC building
- Latte art
- Nice keyboards
- Ocean conservation