Annika Logarta

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EDUCATION

University of Waterloo | Candidate for BASc in Computer Engineering - 3.8 CGPA   Sep 2023 – Apr 2028

SKILLS

Languages: C/C++, Java, Python, Javascript
Hardware: Altium, KiCad, LTSpice, STM32, ESP32, Raspberry Pi, soldering, oscilloscope
Software Tools: React, Three.js, Node.js, Tailwind CSS, Keras, Jetson Nano, Jupyter Notebook, Google Colab

PROJECTS

<u>Vital Watch</u> | *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**

<u>Moodify</u> | *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

<u>KuMahjong</u> | *Vite, React, Tailwind, Axios, Javascript*
- Designed and created interface using **React** and **Tailwind** of a modified Mahjong website designed to gamify studying
- Leveraged **Axios** to make HTTP requests to server to enable dynamic rendering, ensuring accurate gameplay

EXPERIENCE

Data Scientist | Marimetrics Technologies Inc. – *Dartmouth, NS*   Jan 2024 – Present
- Reviewed **5** research papers on water analysis techniques to enhance waterborne disease prediction accuracy
- Conducted **exploratory data analysis** using **Python** to identify patterns, trends, and outliers within datasets
- Implemented **Matplotlib** to a web app to interactively present retrieved data from 7 sensors to clients

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 **slew-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

Filmmaker – Burnaby, BC   Jan 2021 – Aug 2023
- Spearheaded 6 **self-initiated** projects with limited resources, creatively making use of available equipment and locations
- Short skit "Online Odyssey" showcased in 2021 online gallery hosted by the **Emily Carr University of Art + Design**

INTERESTS

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