LIAM FRIJA-ALTARAC

Montreal, QC

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EDUCATION

Master of Computer Science, École de technologie supérieure (ÉTS)   Expected 2024
Machine Learning and Computer Vision

Bachelor of Electrical Engineering, École de technologie supérieure (ÉTS)   2016 - 2020
Concentration in Computer Science

DEC in Computerized Systems Technology, Vanier College   2013 - 2016

SKILLS

Technical   Machine Learning, Computer Vision, Image Processing
Software   Python, NumPy, TensorFlow, Qt, Matlab, C

EXPERIENCE

Software Developer   Feb 2021 - Jan 2022
Belden Inc.   *Montreal, QC*

- Programmed various tools (using Python, NumPy, Qt) to assist with the Research and Development team.
- Wrote software to analyse copper as well as fiber optic components.
- Developed a reference/dependency tool with text analysis for internal file management.

Firmware Development Intern   May 2019 - Aug 2019
CAE Healthcare   *Montreal, QC*

- Developed firmware in C for STM32F4 microcontrollers.
- Worked with communication protocols such as SPI, I^2C, and DMA.
- Programmed real-time systems.

Automated Test System Development Intern   Sept 2017 - June 2018
Belden Inc.   *Montreal, QC*

- Programmed software to analyse S-Parameters.
- Wrote software to establish communication with a Vectorial Network Analyzer to acquire data remotely.
- Developed a graphical interface in Python to display acquired and calculated data.
- Developed circuits and software to facilitate testing and automate report generation.

PROJECTS

Semi-Autonomous Car. Programmed an STM32F0 (ARM Cortex-M0) for a semi-autonomous car that could be controlled by remote control, as well as avoid obstacles. Implemented USART and I^2C from scratch, I/O control (motors, sensors, etc.), and collision avoidance logic.

Neural Network with Backpropagation. Wrote a Neural Network (MLP) library from scratch using Python and NumPy, to obtain a deeper understanding of Backpropagation. Developed a web interface in Bootstrap and Flask to interface with the library to easily train and configure a custom MLP.

Race Horse Biometric System. Built a real-time biometric system that would be used for race horses to monitor their vital signs while racing. Programmed an Atmel microcontroller to interface with the various sensors. Developed a web interface (Bootstrap) to monitor the horse's condition.