

LIAM FRIJA-ALTARAC

+1(514) 466-1570 | Montreal, QC

liam.frija-altarac.1@ens.etsmtl.ca | linkedin.com/in/liamaltarac

EDUCATION

Master of Computer Science , École de technologie supérieure (ÉTS) Machine Learning and Computer Vision	Expected 2024
Bachelor of Electrical Engineering , École de technologie supérieure (ÉTS) Concentration in Computer Science	2016 - 2020
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 Belden Inc.	Feb 2021 - Jan 2022 <i>Montreal, QC</i>
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- 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 CAE Healthcare	May 2019 - Aug 2019 <i>Montreal, QC</i>
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- Developed firmware in C for STM32F4 microcontrollers.
- Worked with communication protocols such as SPI, I²C, and DMA.
- Programmed real-time systems.

Automated Test System Development Intern Belden Inc.	Sept 2017 - June 2018 <i>Montreal, QC</i>
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- 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 I²C 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.