Guillaume **Lagrange**

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Education

Bachelors in Automation Engineering   2019
ÉCOLE DE TECHNOLOGIE SUPÉRIEURE, MONTRÉAL

College Diploma in Computerized Systems Technology   2015
COLLÈGE GÉRALD-GODIN, SAINTE-GENEVIÈVE

🏆 Award of Excellence from the Department of Studies for my collegiate end of studies project, a remote monitoring and data logging system.

Skills

Tools	MS Visual Studio, Eclipse, Git, PyTorch/Libtorch, Photoshop, LaTeX
Programming	Python, C, C++, MATLAB, SQL, HTML, CSS, PHP, AWK
Database Management	MySQL, SQLite
Cloud-Based Technologies	AWS, Google Cloud Platform
Operating Systems	Linux, Windows
Electronics	Digital Electronics, Microcontrollers, Printed Circuit Design, Prototyping, Communication Protocols (RS232), Programmable Logic Controllers

Experience

Software Development Engineer – Artificial Intelligence   Sept 2018 - present
TELEDYNE DALSA, SAINT-LAURENT   Internship + job

- Develop a real-time object detection system based on state-of-the-art architectures for sorting small objects in real-life application demo
- Collaborate on AI plugin application development from prototype to deployment for the company's machine vision software interface
- Implement different deep neural network architectures for object detection and classification tasks, along with training and inference procedures
- Explore deep learning applications on embedded system-on-modules (NVIDIA Jetson AGX Xavier) and evaluate the performance
- Develop an automated tool to allow quick image dataset construction from the web for machine learning applications
- Author detailed documentation on the development process and tools used for the new AI plugin

Software Development Engineer

HEWLETT-PACKARD ENTERPRISE, SAINT-LAURENT

<div align="right">Summer 2017
Internship</div>

- Refactor the tool for generating files with unique numbering of product's high-level system log messages
- Optimize the build system and eliminate circular dependencies between modules
- Integrate a customized automation tool (bot) into the team's collaboration center
- Author detailed documentation on the new software tools used by the team

Technician in Instrumentation and Control

AESL INSTRUMENTATION INC., PIERREFONDS

<div align="right">2011-2016
Summer job</div>

- Verify, calibrate, diagnose and repair measuring devices
- Integrate programmable modules
- Wire control panels and continuous analyzers
- Configure data logging systems
- Install control systems and continuous analyzers
- Collaborate on project development

Projects

Deep Neural Networks Model Compression and Acceleration

- Conduct a literature review of research papers on the different deep neural networks model compression and acceleration methods
- Write a survey summarizing the most common methods in the research community
- Provide in-depth analysis on a subset of the chosen methods
- Implement the chosen methods using the PyTorch library and compare the methods based on different performance measures

Remote Monitoring and Data Logging System

- Plan and develop a project / prototype
- Design the electronic circuit and the circuit board
- Program tasks to run on a microcontroller in C
- Configure embedded computer as a server on the network
- Develop a web page to display current readings of different connected devices and download their data history
- Present the final project at an exhibition

Interests

⚙ Machine Learning   👁 Computer Vision

🔧 Robotics   ✏ Graphic Design