

Louis-Philippe Asselin

JR. COMPUTER ENGINEER, MS STUDENT · [HTTPS://ASSELIN.ENGINEER](https://asselin.engineer)

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Education

M.S. in Computer Vision & Deep Learning (Université Laval)

Summer 2018 - present

Thesis with Jean-François Lalonde and Denis Laurendeau

B.S. in Computer Engineering (Université Laval)

(4 year degree) 2014 - 2018

DEC Natural Sciences (Cégep de Sainte-Foy)

2012 - 2014

Professional Experience

Internship, Computer Vision and Machine Learning Team

Summer 2017

XPERTSEA

- Create a custom distributed cloud computing framework for machine learning on big data
- Adapt the training architecture to the new distributed framework
- Develop with Python, Amazon Cloud Services, Docker, PostgreSQL and continuous integration tools

Internship, CERVO Brain Research Centre (Simon Duchesne, Ph.D.)

Summer 2016

MEDICS LABORATORY

- Refactor and adapt MATLAB and C code for parallel computing of a patch-based segmentation program analysing anatomic images of the human brain
- Create a prototype with GUI for structural modeling with graphs of neurodegeneration in Alzheimer's
- Develop a Linux MATLAB compiling environment

Internship, Research Assistant, LVSN (Jean-François Lalonde, Ph.D.)

Summer 2015 - 2016

UNIVERSITÉ LAVAL, COMPUTER VISION AND SYSTEMS LABORATORY

- Test and optimize optical flux algorithms to automate HDR images alignment
- Implement new algorithms for image comprehension and image synthesis
- Create Django website hdrdb.com
- Collaborate with graduate students

Developer and Assistant Technician - L'Heureux inc (Part Time)

2011 - 2015

Ultimate Frisbee Coach

2011 - 2014

Bicycle Mechanic

2013

Technical Skills

- **Languages:** Python, C, MATLAB, C++, Rust, ARM, Javascript, HTML, CSS, VHDL, Java, UML, English, French (native)
- **Tools:** [Linux](#), STM32, TI MCU, Django, Flask, SolidWorks, nginx/apache, RPi, Arduino, Altium Designer, Latex, Google

Honors & Awards

- 3rd Position: Operating Systems. CS Games 2018
- 1st Position: Sport combined with programming. CS Games 2018
- Université Laval Faculty of Science and Engineering Research Fellowship, awarded for academic merit 2015
- 1st Position Logic Circuit Competition 2015 Université Laval
- Participation to Junior Canadian Ultimate Championships 2014 and member of Quake, who competed in the Pan American Games

Personal Projects

- <https://Asselin.Engineer/projects>
- In 2018: [Battery Management System](#), [Custom In-Ear Monitors](#), [Electric Longboard](#), [Battery Pack](#)
- Smart alarm based on spectral analysis of night heart rate and custom DIY electrooculograph data
- Semi-automatic tomato growing [hydroponics system](#). Microcontrollers, Raspberry Pi and homemade high power LED lights