Louis-Philippe Asselin

Applied AI Scientist, Jr. Computer Engineer · https://Asselin.Engineer

844 Beauregard, Québec, Qc G1V4Z9

418 802-1076 | louis-philippe.asselin.2@ulaval.ca

Education

M.S. in Deep Learning & Computer Vision (Université Laval) *2018 - present*
- Thesis with Jean-François Lalonde and Denis Laurendeau
- SVBRDF estimation: paper and project page

B.S. in Computer Engineering (Université Laval) *(4 year degree) 2014 - 2018*

DEC Natural Sciences (Cégep de Sainte-Foy) *2012 - 2014*

Professional Experience

Applied AI Scientist *2020 - **present***

Bentley Systems

Part Time Consulting *2017 - **present***

Self Employed
- Deep Learning, Computer Vision, Cloud and Embedded
- R&D and prototyping, mostly industrial context
- 1500+ hours

Teaching Assistant, Real-Time Embedded Systems *2019*

Université Laval

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

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 and 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, Javascript, HTML, CSS, VHDL, Java, UML, English, French (native)
- **Tools:** Docker, Linux, PyTorch, STM32, TI MCU, Django, Flask, SolidWorks, RPi, Arduino, Altium, 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