Louis L. W. D. Pahlavi

PERSONAL DETAILS

Nationality	French, Canadian
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TECHNICAL SKILLS

Theory	Control theory and robotics, Networking, Optimization, Algorithms, Machine learning
Build tools	Makefile, CMake
Version control	Git
Platforms	Linux, Raspberry Pi, Arduino
Libraries	Boost, QT, CVX, Tensorflow

LANGUAGES

English
French
Italian
German
Czech
Polish

EDUCATION

University of Toronto, BASc in Computer Engineering

September 2014–April 2019

- Minor in Robotics and Mechatronics
- Final Project: *Distributed Formation Control of a Swarm of Unicycles*
- 16 month internship between third and fourth years of studies
- Latest term 92.1% average (ranked 4 out of 173), 3.86/4.00 CGPA

PROGRAMMING LANGUAGES

C/C++
Python
MATLAB
Java

RESEARCH AND INDUSTRY EXPERIENCE

Systems and Control Engineering Intern

May 2017–August 2018

Verity Studios AG — Zürich, Switzerland

- Worked on improving the onboard control algorithms of swarms of quadcopters implemented in C++.
- Evaluated and characterized flight performance and effectiveness of calibration routines using Python.
- Serviced entertainment drone show systems overseas and oversaw flight operations for several weeks.

Researcher

May 2016–August 2016

ETH Zürich Laboratory for Biosensors and Bioelectronics — Zürich, Switzerland

- Developed the control and image processing software for a biosensor measuring protein interactions.
- Created a Graphical User Interface using Qt to control the actuators and interface them with various sensors.

Radio Frequencies Engineer

June 2015–September 2015

University of Toronto Institute for Aerospace Studies - Space Flight Laboratories — Toronto, Canada

- Designed and simulated the early prototypes of a deployable antenna mounted on the NORSAT-2 maritime communications satellite (launched in 2017) in collaboration with the European Space Agency.

Researcher
May 2015–June 2015

University of Toronto Reconfigurable Antenna Laboratory — Toronto, Canada

- Created a MATLAB simulation to model a satellite's orbit and predict antenna radiation intensity on the surface of the Earth. Worked on antenna synthesis to find an antenna array for a given desired coverage area.

PROJECTS AND TEACHING

Capstone Team Lead
September 2018–April 2019

University of Toronto Faculty of Engineering — Toronto, Canada

- Implementing a fully distributed algorithm for the formation control of a swarm of wheeled robots in C++.
- Responsible for the design of the communication interfaces between onboard modules in C++ and Python.
- Developed a Python simulation framework to test and tune the control algorithms.

Teaching Assistant
September 2016–December 2016

University of Toronto Faculty of Engineering — Toronto, Canada

- Taught APS100 – 'Orientation to Engineering' to first year Electrical and Computer Engineering students.

Wireless Communications Lead
September 2014–June 2016

University of Toronto Aerospace Team (Space Systems) — Toronto, Canada

- Designed, built and tested the antenna and communication module PCB, on a student-built nano-satellite.
- Presented our design at several Product Design Reviews and the Critical Design Review in Vancouver.

Ground School Instructor
September 2014–January 2015

330 Danforth Tech Royal Canadian Air Cadet Squadron — Toronto, Canada

- Coordinated and taught the pilot ground school course at 330 Danforth Tech Royal Canadian Air Cadet Squadron.

SCHOLARSHIPS AND AWARDS

- **Faculty of Applied Science and Engineering Dean's Honours List** 2014–Present
- **Gordon R. Slemon Scholarship** – Awarded for engineering design and academic excellence 2016
- **University of Toronto International Exchange Bursary** 2016
- **University of Toronto Centre for International Exchange Award** 2016
- **Royal Canadian Air Cadet Glider and Power Pilot Scholarships** 2013, 2014