Louis L. W. D. Pahlavi

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PERSONAL DETAILS

Website	lpahlavi.github.io
Nationality	French, Canadian
Languages	French (native), English (native), Italian (fluent), German (intermediate)

TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++, MATLAB, Java
- **Software and CAD:** Unix, Git, Jira, Gerrit, Simulink, Tensorflow, Qt, LaTeX

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 professional internship between third and fourth years of studies
- Latest term 92.1% average (ranked 4 out of 173), 3.86/4.00 cumulative GPA

RESEARCH AND INDUSTRY EXPERIENCE

Systems and Control Engineering Intern, Verity Studios AG May 2017–August 2018

- 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, ETH Zürich Laboratory for Biosensors and Bioelectronics (LBB) May 2016–August 2016

- 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.

Researcher, University of Toronto Reconfigurable Antenna Laboratory May 2015–September 2015

- 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.
- 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

Capstone Team Lead, University of Toronto Faculty of Engineering September 2018–April 2019

- 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.

Wireless Communications Lead, University of Toronto Aerospace Team September 2014–June 2016

- 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.

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