Louis L. W. D. Pahlavi

TECHNICAL SKILLS

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

PERSONAL DETAILS

Nationality French, Canadian

louis.pahlavi@mail.utoronto.ca

+1 (647) 909-5487

106 Wineva Ave, Toronto, ON, M4E 2T2, Canada

lpahlavi.github.io

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

LANGUAGES

English
French
Italian
German
Czech

SCHOLARSHIPS AND AWARDS

- **Applied Science and Engineering Dean's Honours List** 2014–Present
- **Gordon R. Slemon Scholarship** 2016
- **University of Toronto International Exchange Bursary** 2016
- **University of Toronto Centre for International Exchange Award** 2016
- **Royal Canadian Air Cadet Power Pilot Scholarship** 2014

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.

Researcher

May 2015–September 2015

University of Toronto Reconfigurable Antenna Laboratory — 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.
- 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++.
- Built and tested the communication interfaces between onboard modules and C++ and Python applications.
- Developed a Python simulation framework to test and tune the control algorithms.

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.