

Gus Crowards

Summary

An ambitious engineer with a wide range of work experience and a diverse skillset. Graduating from the UBC Engineering Physics program in May 2017, looking for meaningful employment in a technical field. Professional experience in mechanical and software engineering and project management.

Skills

Software	Mechanical
Python, C, C++, Java MATLAB Microcontrollers, FPGA, assembly SQL Database Management	Solidworks, GD&T Rapid-prototyping tools (water-jet etc.) Resonance and vibration prevention
Robotics	Misc.
Machine learning Control algorithms (PID) Machine vision Analog and digital circuit design	Technical communication, LaTeX Experimental design Version control (Git, EPDM)

Technical Experience

Alma Mater Society (AMS) Sustainability

Sustainability Projects Coordinator

May 2016 - Current

- ▶ Manage 3 engineering student teams (2 electrical and 1 mechanical) completing projects for the AMS.
- ▶ Develop python scripts to automatically query databases of building metrics.
- ▶ Write eligibility and application policy for a \$100k sustainability fund.

Kodak

Electromechanical Engineering Internship

May 2015 - Dec 2015

- ▶ Wrote test suites in LabVIEW for testing thermal-laser heads.

- ▶ Wrote data collection and analysis software packages in Python and MATLAB to parse thousands of files and flag inconsistent data.
- ▶ Designed the mechanical components of a \$40,000 thermal-laser test jig.

Schneider Electric

Electromechanical Engineering Internship

Jan 2014 - Apr 2014

- ▶ Designed a three-piece solar shield for Schneider's latest power inverter.
- ▶ Modelled OEM parts and made drawings for manufacture in Solidworks.

Education

University of British Columbia, Vancouver

Faculty of Applied Science, Engineering Physics

Sept 2012 - May 2017

- ▶ Cumulative GPA: 87%
- ▶ UBC's most rigorous degree. Combines mechanical, electrical, and software engineering with honours physics and math.

Technical Projects

Robot Characterization with Machine Vision

Designed an analytics tool for robotic motion for Zaber Technologies. The system controls a set of robotic actuators and watches the resulting end effector trajectory using stereo vision. The system can then determine important information about the robot that allow a user to undertake forward kinematics calculations.

Agricultural Tech Entrepreneurship

Pursued multiple opportunities, starting with an autonomous pollination device for almonds. My team decided not to pursue the venture at the expense of our education, but the ideas garnered \$20,000 in private funding and a large potential customer base.

Prize Winning Autonomous Rover

Led the mechanical design and wrote the control system in C for a fully autonomous robot that won first prize in the 2014 Engineering Physics Robot Competition. It was tasked with traversing an obstacle course and retrieving magnetized objects.