

# Anthony Pasquariello

Mechatronics Engineer

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## EDUCATION

### UNIVERSITY OF WATERLOO

BACHELOR OF APPLIED SCIENCE -  
HONOURS MECHATRONICS  
ENGINEERING (WITH DISTINCTION)  
2017 | Waterloo, Ontario

### SENECA COLLEGE

RECOGNITION OF ACHIEVEMENT IN  
MECHANICAL DESIGN TOOLS:  
SOLIDWORKS  
2015 | Toronto, Ontario

## COURSEWORK

Courses taken in both mechanical and electrical engineering include:

- Automatic Control Systems
- Power Electronics and Motor Drives
- Mechanics of Deformable Solids
- Numerical Methods
- Sensors and Instrumentation
- Electromechanical Machine Design
- Robotic Manipulators: Kinematics, Dynamics, Control
- Thermodynamics and Heat Transfer
- Digital Control Applications
- Microprocessors and Digital Logic
- Autonomous Mobile Robots
- Multi-Sensor Data Fusion

## SKILLS

### Software

- Autocad, Solidworks, NX
- Matlab and Simulink
- C/C++, RobotC, and Ruby
- PLC Ladder Logic
- Linux and ROS
- HTML, CSS, and Javascript
- Upverter, Eagle, and PSIM

### Hardware

- Machine Shop (Milling Machine, Lathe, Drill Press, Bandsaw)
- Soldering, Oscilloscopes, and Data Acquisition
- FDM, SLA, and SLS 3D Printing
- Material Selection and Part Sourcing

## INTERESTS

Tinkering with Electronics, Hockey,  
Photography, Rock Climbing

## EXPERIENCE

### AECOM | AUTOMATION ENGINEERING INTERN

April – August 2016 | Markham, ON

- Using Autocad designed and created P&ID drawings for various mechanical and electrical systems in a waste water treatment plant.
- Retrofitted old AB PLC layouts with newer GE PLC in an operational water treatment plant.

### THALMIC LABS | MECHANICAL ENGINEERING INTERN

September – December 2015 | Kitchener, ON

- Designed, fabricated, and built numerous complex and high precision fixtures for testing components.
- Designed and produced many 3D printed and CNC parts for fixtures and jigs, aiding in both assembly and testing.
- Researched, developed, and implemented new cost saving manufacturing practices resulting in an updated BOM.
- Worked writing the protocols for and executing the buildup of a new prototype.

### CONAVI MEDICAL | MECHANICAL ENGINEERING INTERN

January – May 2015 | Toronto, ON

- Performed GD&T analysis on mechanical assemblies and coordinated with the suppliers to resolve the problem.
- Used Solidworks to design complex mechanical parts applying a revision controlled process.
- Assisted in the regulatory submission process by writing and performing test cases to meet strict FDA industry standards.

### PIVOTAL LABS | AGILE TEST ENGINEER

April – August 2014 | Toronto, ON

- Developed and implemented automated scripts in Ruby for testing mobile and web applications to accelerate efficiency of release candidate testing.
- Designed and executed test plans for numerous mobile and web applications ensuring clients received quality products.

### MULTIMATIC INC | TEST ENGINEERING INTERN

January – April 2013 & September - December 2013 | Markham, ON

- Designed and built fixtures for automotive component testing to meet design specifications including fatigue and ultimate tensile strength testing.
- Analyzed data and provided recommendations after running tests on MTS actuators and an Instron tensile tester using Microsoft Excel.
- Tested and evaluated the performance of different materials during crush tests.

## RELEVANT PROJECTS

### ENVIRONMENTAL SENSOR NETWORK

- Developed a network of air quality sensors to detect harmful concentrations of gases and dust in urban areas.

### MYO CONTROLLED ROBOTIC ARM

- Built a robotic arm and developed a program that allowed the user to control it using a Myo armband.

### SEARCH AND RESCUE ROBOT

- Lead mechanical designer in completing an autonomous search and rescue robot.