Leo Gabriel

Mechathronics Engineering Student

Aspiring Mechatronics Engineer with a love for building cool stuff. Actively involved co-op student, quick learner and enthusiastic team member. Seeking co-op employment for the Winter 2021 semester.

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EDUCATION

Bachelor of Engineering (Co-op)
University of Waterloo

09/2020 - Present

Relevant Courses
- Mechatronics Engineering
- Calculus I
- Digital Computation
- Linear Algebra I

Ontario Secondary School Diploma
Oakville Trafalgar High School

09/2016 - 06/2020   *Senior GPA: 96.5%*

Relevant Courses
- Tech Design
- Computer Science
- Computer Engineering
- Physics

WORK EXPERIENCE

Office System Administrator
Doctor's Office

09/2016 - Present

Tasks
- Facilitated the digitization of over 500 patient medical records into a database using EMR software
- Wired and configured a new multi-room phone system
- Act as IT Support for the office staff. Solve any technical issues with the phone, computer, printer & fax systems

Data Entry Clerk
St. Andrew's Church

06/2019 - 08/2019

Tasks
- Designed an efficient system to digitize over 2000 marriage licenses dating back to the 1800's
- Various labour tasks around the church grounds

VOLUNTEERING

Bottld Canada (2017 - Present)
Founder & leader of this environmental engineering group. We build environmentally sustainable greenhouses using recycled bottles.

OTHS Neurology Club (2017 - 2018)
Co-founded a student group to study the science of Neurology and prepare for the Canadian National Brain Bee.

OTHS Junior Jazz Band - Lead Trumpet (2016 - 2018)
Practiced weekly with the band and performed at school concerts and regional competitions. Won Silver at the 2018 Collingwood Regional Music Festival.

SKILLS & INTERESTS

Java   Python   C++   JavaScript   Robotics   SolidWorks   3D Printing   Machinery   PCB Design   Computer Hardware   Iterative Design

PERSONAL PROJECTS

Barn Door Star Tracker ⬀
- Built custom tripod to track and photograph star movements over long exposure times
- Designed parts for 3D printing and construction using SolidWorks
- Used to capture photos of the milky way
- Iterated on design to improve stability

OpenSimplex Procedural Map Generator ⬀
- Used Java 11 with the OpenSimplex noise library to build a map generator
- Generated 3D cylindrical and 4D toroidal noise to make wrapping 2D and 3D maps and globes
- Export 3D maps as point clouds to make meshed models in MeshLabs

Mecanum Drivetrain ⬀
- Designed, built, and wired an omnidirectional drivetrain
- Model designed in SolidWorks along with technical drawings for machining
- Generated G-code using SolidWorks CAM for CNC mill

Bottl'd Canada ⬀
- Set up recycling donation boxes around the community
- Designed, prototyped and iterated on greenhouse design
- Partnered with the CN Tower to build a custom greenhouse to be displayed on the lawn (on hold due to COVID19)
- Gathered peers to help build greenhouses

AWARDS

Computer Engineering Award (2020)
Awarded for achieving the highest grade (99%) in Grade 12 Computer Engineering.

Chemistry Award (2020)
Awarded for achieving the highest grade (98%) in Grade 12 Chemistry.

Finalist - Georgian College FIRST Robotics (2020)
Active member and advisor of FIRST Robotics team 1374 for 3 years. Our team's robot came second place in this regional competition.

Team Spirit Award - FIRST Robotics (2020)
Celebrates extraordinary enthusiasm and spirit through exceptional partnership and teamwork during theFIRST competition season.

Gracious Professionalism Award - North Bay FIRST Robotics Competition (2019)
Celebrates outstanding demonstration ofFIRSTCore Values by working together both on and off the playing field.