



# A/G Andrew Guo

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## EDUCATION

**Mechatronics Engineering / (BASc)**

*University of Waterloo*  
September 2022 – April 2027

## AWARDS

**University of Waterloo**

*President's Scholarship of Distinction*

**FIRST Robotics Competition**

*Finalists at the FRC Ontario Provincial Championship  
(2022)*

*Excellence in Engineering Award at the ONT District  
University of Waterloo Event (2022)*

*Event Winner and Quality Award at the ONT District  
Humber College Event (2022)*

**Crescent School**

*The Board of Governors Award (2022)*  
*The Norris Family Robotics & Technology Award  
(2022)*

## INTERESTS

*Working Out, Hockey, Robotics, Cycling, Chess*

## SUMMARY OF QUALIFICATIONS

*Combined 4+ years of experience working with SOLIDWORKS and Fusion 360. Proficient with rapid-prototyping techniques such as 3D-printing and Arduino electronics. Talented in programming with Python, Java and C++ using Git/GitHub. Quick learner, resilient, and excels working in team environments.*

## EXPERIENCE

**Software Development Intern**

*Heliolytics/Toronto/July 2022 – August 2022*

- Strengthened the suite of analysis tools used to conduct aerial inspections of global solar farms bettering the quality of insights and reports for clients.
- Developed CRUD APIs for classifying and managing the types of problems identified during the aerial imagery analysis process.
- Refined QA processes by increasing unit test coverage and implementing validation to maintain data integrity and reliability.
- Contributed to the AGILE software development environment by collaborating in sprint planning, code reviews and team retros improving cross-team communication and preventing work silos.

**Robotics Consultant**

*Crescent School/Toronto/July 2022 – September 2022*

- Formalized Tech Design course content by authoring a complete tutorial series on Fusion 360 by introducing essential CAD/CAM concepts such as 2D sketching, 3D modeling, working in assemblies and detailed drawings.
- Implemented course objectives by collaborating with fellow department staff to deliver curriculum to 100+ grade 9-12 students.
- Launched course materials in September 2022 streamlining the TDJ3M and TDJ4M curriculum at Crescent School.

**Chief Designer, Design + Manufacturing Team Member**

*FRC Team 610/Toronto/September 2018 – April 2022*

- Headed the design and manufacturing sub-team of 20+ members through a fast-paced build season by organizing and managing design reviews, testing cycles and prototyping sessions.
- Designed a full assembly of the robot using CAD, including detailed drawings and CAM for manufacturing purposes.
- Iterated on several electro-mechanical subsystems using the engineering design process resulting in lighter and more robust mechanisms.
- Fabricated 100+ unique parts on a lathe, manual mill, CNC mill and other machines.