
Education

- **University of Waterloo, Honours Mechatronics Engineering, BAsC** (Class of 2023)
- **École Secondaire Catholique Père-René-de-Galinée** (Class of 2018)
[Cambridge, ON] Fully french education, earning IB certificate. Ranked as a top 5 student.

Publications

- Charging Cavaliers Research Team. "Search for isolated fractionally charged particles (FCP) using CERN's 10 GeV/c proton beam and fixed target."; *Under Review*; Institute of Physics IOP (2018).

Awards and Certificates

- **Top 5 highest-scoring students from PRDG** (2018)
- 2nd place, **International Autonomous Robot Racing Challenge** (2017)
As the only high school against international universities from Canada, US, India, Thailand...
- **International Baccalaureate Middle Years Programme Certificate and Attestation** (2015)
Received attestation for participating in the 4 year program and the certificate for passing the online examinations (only top quintile of my cohort).
- **CERN's Beamline for Schools Competition** winner (2017)
As the first team from the americas to win this international competition.
- **IB Award for Scientific and Technological Innovation** (2015 & 2017)
Awarded twice for my contribution in building my school's STEM infrastructure (leading physics team, starting the first-ever robotics & engineering teams ...) and inspiring the younger students.
- Certificate of **Bilingualism** (2018)
- IB MYP **Best Personal Project** — awarded at a fair for my first autonomous robot project (2015)
- Bronze Cross & **Emergency First Aid** Certification (2014)
- **Honour Roll** (every year) & **Ontario Scholar**

Recent Involvements

- **Charging Cavaliers Particle Physics Team**, Member (Fall 2016 - Present)
Conducted an experiment to prove the existence of a theorized particle. Currently in analysis.
- **Cavalier Robotics Team**, Founder & Leader (Fall 2016 - Summer 2018)
- **2nd Physics Team**, Leader (Fall 2017 - Spring 2018)
- PRDG **Student Council**, Treasurer (Fall 2017 - Summer 2018)
- PRDG **Squash Team**, Cofounder (Fall 2016 - Spring 2017)
- PRDG **Math Team** (Winter 2014 - Winter 2017)

Personal Interests

- Squash and Table Tennis
- Languages (English, French, learning Egyptian Arabic)
- Robotics, computer vision and autonomy

Skills

- **Software:**
 - **Programming languages:** Python, C++, C (mainly MCU programming), Web Dev (HTML, CSS & JS), Android native app development (Java, C++)
 - **Frameworks:** Jekyll, OpenCV, JNI (novice), ROOT (novice), Matplotlib, Android NDK
 - **Tools:** Android Studio, Git, Heroku, Bash, Xcode (novice IOS development), Jupyter Notebooks
 - **Operating Systems:** Linux, MacOS & Windows
- **Engineering:**
 - **Design:** EagleCAD, Fritzing, Maya,
 - **Electronics:** PCB Fabrication, Soldering, Microcontroller Development, Rapid Prototyping
- **Other:** Video production, Microsoft Office