

Ali Najmaldin

BIOENGINEER · BIOMEDICAL, DIAGNOSTICS AND HIGH THROUGHPUT SCREENING ENGINEERING

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I am an aspiring bioengineer who is highly interested in using software development to model many biological phenomena by means of mathematical methods. My preferred domains include tumour growth and biomedical devices development. I am particularly interested in real-world applications of these discoveries and the impact they can have on people, which lead me to be fascinated by the world of surgery. I will develop these skills in order to change the world and transform how the medical field is viewed as a whole. When I am not working, I like to fly planes, especially while enjoying the horizons with friends and family.

Education

Student at McGill University

UNDERGRADUATE IN BIOENGINEERING

Quebec, Canada

Aug 2017 - Apr. 2021

- I am working towards a bachelor's degree in bioengineering at McGill University

Dorval Aviation

PRIVATE AND COMMERCIAL PILOT LICENSE

Quebec, Canada

Jun 2018 - Ongoing

- I am working towards my private and commercial pilot license.
- I will be looking to get an IFR rating, night rating, VFROT rating, sea plane rating

Parachute Montreal

SKYDIVING LICENSE

Quebec, Canada

Jun 2018 - Ongoing

- I am working towards my private and commercial pilot license.
- I will be looking to get an IFR rating, night rating, VFROT rating, sea plane rating

John Abbott College

D.E.C. IN HEALTH SCIENCE

Quebec, Canada

Aug. 2015 - May 2017

- Received a college diploma in the health science field at John Abbott College.
- Awarded Honour Roll all four semesters.

Skills

Programming Python, C/C++, Matlab, LaTeX, R, JAVA, GitHub, Bash

Certificates Hélicoptère Pilot, Private Pilot License SimuLink Matlab, MSERT First-Aid, WHMIS 2015

Software 2D/3D CAD/CAM software suite (including AutoCAD), MATLAB, Maple, MS Office Suite, Mathematica, GitHub

Languages English, French, Arabic

Internship Experience

McGill Undergraduate Researcher

CO-AUTHOR AND RESEARCH ASSISTANT

Quebec, Canada

May 2019 - Ongoing

- Working closely with Professor Georgios Mitsis for the Investigation of dynamic functional connectivity using simulated and experimental multimode.

Polytechnique Montreal

CO-AUTHOR AND RESEARCH ASSISTANT

Quebec, Canada

May 2018 - Dec 2018

- Helped in the creation of a biomedical sensor for the detection of Anti-epileptic drugs that are hard to monitor
- Assisted the PhD candidate in writing a review article summarizing the many methods for therapeutic drug monitoring of AEDs.
- Conducted many experiments on AEDs in the lab to determine their performance and their effects on the human body.
- Performed experiments on AEDs to determine the best way to do TDM for various applications

Publications

Anti-Epileptic Drug Detection Systems – A Review

CO-AUTHOR

Quebec, Canada

May 2018

- <https://www.gavinpublishers.com/articles/Review-Article/Biosensors-and-Bioelectronics-Open-Access-ISSN2577-2260/detection-methods-and-tools-of-administered-anti-epileptic-drugs-a-review>

Clinal variation and phenology in two congeners of *Phragmites australis* (Cav.) Trin. Ex Steud in Northeastern North America: Implications for Current Management and Future Climate Change

Quebec, Canada

RESEARCH ASSISTANT AND CONTRIBUTOR

Aug. 2016 - May 2017

- Performed various experiments in a biological laboratory and collected various data to study the clinal variation and phenology in two congeners of *Phragmites australis*
- Learned various techniques such as how to work in a sterile environment laboratory, how to dissect following protocol, key features to observe on a microscope, etc.
- https://www.phragmites.crad.ulaval.ca/files/phragmites/Final_Thesis_Lovat.pdf

Experience

Teaching Assistant (TA)

Quebec, Canada

MCGILL TEACHING ASSISTANT FOR MATH 264 AND PRIVATE TUTOR

Aug. 2018 - Ongoing

- I have been selected to be the TA for MATH 264
- I am a private tutor with McGill Tutoring services for classes that I have previously taken.

Volunteering

Doctor Shadowing

Quebec, Canada

EMERGENCY ROOM AND GENERAL SURGEON SHADOWING

Dec 2018 - Jan 2019

- Assisted the supervising physician in various tasks and took notes.
- Allowed to spectate live ongoing surgeries and how trauma is to be treated in the ER.
- Experienced the daily lives of doctors

Héma-Québec

Quebec, Canada

COMPLETE VARIOUS TASKS FOR A SMOOTH BLOOD DONATION

Jan 2018 - Feb 2018

- Welcome donors and offer information.
- Communicate with blood donors so that they remain calm and distribute food.

Extracurricular Activity

Vice President of External Affairs at McGill Student's Flying Club (MSFC)

Quebec, Canada

VP EXTERNAL

Aug. 2017 - Ongoing

- Was elected to be part of the MSFC executive team.
- Participated in various activities with the MSFC; went on several day trips: skydiving, pilot for a day.

McGill Rocket Team

Quebec, Canada

SOFTWARE DEVELOPER

May 2018 - Ongoing

- Developed simulation plugin in C++ in Gazebo for the Mars rocket.
- Developed libraries and function in C for the rocket.
- Updated Documentation
- Worked with a team of over 30 students on GitHub.

Mars Rover Arm Software Developer

Quebec, Canada

MCGILL ROBOTICS

May 2018 - Ongoing

- Developed simulation plugin in C++ in Gazebo for the Mars Rover Arm Systems in ROS (Robot Operating System).
- Developed a six-axis inverse kinematics control in MoveIt for the rover arm.
- Worked with a team of over 60 students on GitHub.

Honors & Awards

ReSMiQ intership scholarship

Quebec, Canada

POLYTECHNIQUE MONTREAL

May 2018 - Aug. 2018

Awarded a scholarship of \$3500 to stimulate my integration within the ReSMiQ laboratories.

John Abbott College Honour Roll for all four semesters

Quebec, Canada

JOHN ABBOTT COLLEGE

Aug. 2015 - May. 2017

Completed my semesters studies with an overall average among the top ten percent of all students registered in my program.