

# 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 the development of biomedical devices. I am also interested in the real-world applications of these discoveries and the impact that they can have on people, which lead me to be fascinated about the world of surgery. I hope to be able to develop these skills in order to change the world and 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

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

Quebec, Canada

Aug 2017 - Apr. 2021

### Royal Air-Prestige Pilot License

PRIVATE AND COMMERCIAL PILOT LICENSE

- 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

Quebec, Canada

Jun 2018 - Ongoing

### John Abbott College

D.E.C. IN HEALTH SCIENCE

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

Quebec, Canada

Aug. 2015 - May 2017

## Skills

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

**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

### Polytechnique Montreal

CO-AUTHOR AND RESEARCH ASSISTANT

- 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

Quebec, Canada

May 2018 - Dec 2018

## Publications

### Anti-Epileptic Drug Detection Systems – A Review

CO-AUTHOR

- The paper is under final review and has been accepted by Biosensors and Bioelectronics

Quebec, Canada

May 2018

### 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

RESEARCH ASSISTANT AND CONTRIBUTOR

- 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](https://www.phragmites.crad.ulaval.ca/files/phragmites/Final_Thesis_Lovat.pdf)

Quebec, Canada

Aug. 2016 - May 2017

## Experience

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### Teaching Assistant (TA)

McGILL TEACHING ASSISTANT FOR MATH 264 AND PRIVATE TUTOR

Quebec, Canada

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

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### Doctor Shadowing

EMERGENCY ROOM AND GENERAL SURGEON SHADOWING

Quebec, Canada

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

COMPLETE VARIOUS TASKS FOR A SMOOTH BLOOD DONATION

Quebec, Canada

Jan 2018 - Feb 2018

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

### Biology Learning Center

A SUPERVISOR IN THE BIOLOGY LEARNING CENTER AT JOHN ABBOTT COLLEGE

Quebec, Canada

Jan. 2017 - May 2017

- Supervised activities at the learning center and took the names of all students that borrowed material.
- Ensured that no students left with any material belonging to the biology department.
- managed computers to achieve smooth operation for students.
- Closed the department at the end of the day.

## Extracurricular Activity

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

VP EXTERNAL

Quebec, Canada

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.

### Mars Rover Arm Software Developer

McGILL ROBOTICS

Quebec, Canada

May 2018 - Present

- 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

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### ReSMiQ internship scholarship

POLYTECHNIQUE MONTREAL

Quebec, Canada

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

JOHN ABBOTT COLLEGE

Quebec, Canada

Aug. 2015 - May. 2017

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