

# 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

### Royal Air-Prestige Pilot License

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

### 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

<b>Programming</b>	Python, C/C++, Matlab, LaTeX, R, JAVA, GitHub, Bash
<b>Certificates</b>	Hélipsair Pilot, Private Pilot License SimuLink Matlab, MSERT First-Aid, WHMIS 2015
<b>Software</b>	2D/3D CAD/CAM software suite (including AutoCAD), MATLAB, Maple, MS Office Suite, Mathematica, GitHub
<b>Languages</b>	English, French, Arabic

## Internship Experience

### 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

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

### 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

Quebec, Canada

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

## 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 - 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

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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.