

Jinx Monsoon

Mechanical Engineer

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Highlights of Qualifications

- Currently completing a PhD in Mechanical Engineering at McMaster University in Hamilton ON eligible for a 12-month Co-op starting in January 2023
- Developed strong problem solving and analytical skills through 5+ years of experience as a Research Assistant
- Experienced in SolidWorks, AutoCAD, and Autodesk Inventor through academic project work

Education

Doctor of Philosophy in Engineering, Mechanical Engineering Co-op **May 2024**
McMaster University, Hamilton ON

Master of Applied Science, Mechanical Engineering **May 2020**
McMaster University, Hamilton ON

Bachelor of Engineering, Mechanical Engineering **May 2018**
McMaster Engineering, Hamilton ON

Experience

Title Research Assistant **Sept 2018 - Present**
McMaster University, Hamilton ON

- Conducted research for the PhD Dissertation “Bone Adaptation to Mechanical Stimuli & Injury”
- Prepared findings for publication and assisted in laboratory analysis, quality control, and data management **by doing x and y**
- Supervised # undergraduate students working on the research project and acted as a liaison between the undergraduate students and the faculty researcher

Biomechanics Teaching Assistant **Sept 2020 – April 2022**
McMaster University, Hamilton ON

- Taught course: Biomechanics 4BB3, an undergraduate course averaging 100 students per semester covering topics such as, Cellular Biomechanics, Hemodynamics, Skeletal Biomechanics, & Locomotion
- Provided leadership to students by guiding them through their coursework and assignments to ensure a thorough understanding of the various course topics
- Graded assignments and quizzes, invigilated exams, and provided feedback to students on areas of improvement

TITLE Research Assistant **Sept 2017 – April 2020**
McMaster University, Hamilton ON

- Conducted research for the Master’s Thesis (2018-2020) “Bone Fracture Limits & Injury Tolerance” and as an undergraduate student (2017-2018)
- Built skills using CNC metal cutting machines and trained undergraduate students to use machines safely
- Demonstrated strong organization skills while accurately documenting, editing, and tracking records of the project progress

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Projects

Autonomous Vehicle Design

Oct 2020 – Feb 2022

- Collaborated in a team of 4 to design and construct a plant floor self-driving vehicle aimed at decreasing the amount of manual labour required to deliver materials on an assembly line
- Improved SolidWorks and CNC machining skills throughout the design and construction processes

Master Key App & Device

June 2021 – Aug 2022

- Created a voice-to-action app and device with Ruby, JavaScript, HTML5, and CSS that allows communication between a mobile app and a device installed over doorknobs
- Demonstrated attention to detail throughout the data modelling, GD&T, coding, and design phase of the app and device's development
- Asked by the Dean of Engineering to enter the 'Apps that Matter' Competition sponsored by Microsoft in Victoria, B.C.; placed 3rd out of 28 teams provincially, and 6th place out of 30 teams nationally

Extracurricular activities

3D Printing Workshop

Nov 2020

- Facilitated a workshop to teach undergraduate students the concepts behind 3D printing technology, as well as the design and functioning of the printer
- Created a hands-on activity to allow students the opportunity to design and print a functioning object

CNC Machining Workshop

Jan 2019

- Facilitated a workshop to teach undergraduate students the concepts behind CNC machining
- Assisted students in the fabrication of a fully functioning 3-axis CNC machine that uses Arduino programming to perform functions like drilling, milling, and cutting

Community Food Advisor

2018 - Present

- Collaborated with advisors and the City of Hamilton to develop educational resources on healthy eating, food preparation and food safety
- Led small workshops and presentations monthly; actively answered questions from the public
- Completed 45 hours of training including 10 educational sessions, the Food Handler Certification course, and two community placements

Women In Engineering Society

2015 - Present

- Actively engaged with Society events and provided mentorship to female 1st year Engineers

Skills

Laboratory:

- WHMIS Certified
- Standard First Aid
- Machine Shop Trained
- Radiation Safety Trained
- Milling, Lathe
- Drill Press
- 3D Printing
- Soldering

Software:

- Solidworks
- Autodesk Inventor
- MATLAB
- AutoCAD
- Python
- Java
- C++
- C#