

# Alaa Nasser

---

Ottawa, Ontario | (613) 879-4576 | [alaa.nasser4@hotmail.com](mailto:alaa.nasser4@hotmail.com) | [linkedin.com/in/alaanasser4](https://www.linkedin.com/in/alaanasser4)

## Summary of Key Qualifications

- Bachelor of Applied Science in Mechanical Engineering at the University of Ottawa
- Microsoft Office proficiency
- SolidWorks Design
- C, MATLAB, and Maple for engineering calculations
- 3D printing
- Prototyping
- Technical Report writing
- Oral and Written communication
- Fluent in English and Arabic
- WHMIS Certification – familiar with operations and safety for the lathe, mill, drill press

## Education

### **BACHELOR OF APPLIED SCIENCE, MECHANICAL ENGINEERING | UNIVERSITY OF OTTAWA**

- Expected graduation: November, 2022
- \$3000 Admissions Scholarship, 2018
- Related coursework: Computer-Aided Design, Machine Design, Vibrations Analysis, Thermodynamics, Fluid Mechanics, Manufacturing, Probability and Statistics, Engineering Materials, Control Systems, Heat Transfer, Electrical Circuits and Machines for Mechanical Engineers, Mechanics of Materials
- Guaranteed admission offer to uOttawa Master's program

## Applied Projects

### **CAPSTONE – DEPARTMENT OF NATIONAL DEFENSE FIELD KITCHEN REDESIGN - 2021**

- Designed a fume hood with internal discharge make-up air to improve ventilation
- Conducted heat transfer modeling and analysis
- Complied with ASHRAE standards
- Optimized the kitchen layout to feed more people and provide safe working conditions for the chefs
- Replaced existing Diesel cooking appliances with electric alternatives to protect the chefs' safety and improve efficiency
- Designed a water station that provides a sufficient steady flow of cold and hot water
- Ensured the kitchen can pack up and re-deploy as a single container
- Ensured the chosen generator can provide enough power supply
- Modeled and parametrized the design with SolidWorks
- Implemented the design with Matlab to create a parametrization GUI
- Provided detailed agenda and minutes to project supervisor
- Presented the proposed solution effectively through various technical reports and a video presentation
- Divided tasks efficiently and developed great working relationships in a five-member team

# Alaa Nasser

---

Ottawa, Ontario | (613) 879-4576 | [alaa.nasser4@hotmail.com](mailto:alaa.nasser4@hotmail.com) | [linkedin.com/in/alaanasser4](https://www.linkedin.com/in/alaanasser4)

## Applied Projects (Continued)

### GEARBOX DESIGN - 2021

- Researched existing data to understand market place standards
- Followed design standards and specifications to implement the most efficient design
- Designed a fully functioning gearbox using parts from McMaster-Carr
- Produced detailed SolidWorks drawings to show multiple views
- Manipulated Excel to automatically calculate data
- Documented the full analysis through a technical report
- Worked efficiently in a four-member team

### ACCESSIBILITY DESIGN FOR WHEELCHAIR - 2019

- Met the wheelchair user and asked questions to know their main concerns
- Benchmarked existing solutions to understand what needs improvement
- Designed and 3D printed a camera case that attaches to the wheelchair
- Connected the camera to a mobile application to help prevent the user from bumping into obstacles
- Participated in uOttawa Design Day and presented the solution to the judges as well as the user

## Volunteering

### KUWAIT SCIENTIFIC CENTER - 2018

- Worked at the information desk and answered customers' questions
- Monitored the equipment in the theatre and reported any problems
- Checked validity of customers' tickets to the theatre and aquarium
- Kept track of the sanitization and quantity of theatre equipment

## Interests and Hobbies

- Painting
- Taking road trips
- Travelling
- Photography
- Outdoor walks and runs