

Marwan Al-Taweel

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April 8th, 2018

Dear Ms. Stephanie d'Obrenan,

Please accept this letter and the accompanying resume as an expression of my interest in the position of **Junior Associate, Collision Reconstruction** within your organization 30 Forensic Engineering.

As indicated in my resume, in June 2018, I expect to receive a Bachelor of Applied Science with Specialization Biomedical Mechanical Engineering from University of Ottawa. However, as of today, I have already fulfilled all of the graduation requirements and would like to then start my employment at any time possible.

I am an imaginative hands-on person and working on new ideas and getting the satisfaction from my accomplishments is what motivates me. I have worked on lots of machinery, such as cars, bikes, air conditioners, computers, and even food processors. Through my experience and work on numerous projects during my years as an undergraduate student, I have acquired a sound overall knowledge of engineering principles, tools, and practices with an emphasis on design. I have applied this knowledge into innovative and successful projects where I acted in many of them as a principal designer. As a result I have become proficient in the 3-D modeling software SolidWorks and Matlab as well as STAR CCM+. I have gained invaluable experience in research and development and material selection through my work on the design of a Total Knee Replacement design. My leadership skills have been developed through taking the responsibility while working on a passive mechanical lower-limb exoskeleton and as well as improving scheduling, coordination and written communication by writing meeting minutes, composing Gantt charts etc.

For my graduation project, I worked in a team with two other extraordinary biomedical engineers to design and parameterize a fully passive lower limb exoskeleton that aids the elderly in obtaining a more efficient and ideal gait. I also designed a wearable smart glove that monitors the dexterity rehabilitation of stroke patients during their therapy.

My personal attributes include taking initiative, leading a team as well as also being part of one and contributing to their work through effective communication of ideas and information.

I have also done a 60 hour certification in the maintenance and assembly of car parts and circuitry at La Cité Collégiale where I had the opportunity to pull apart and reassemble internal combustion engines, gearboxes, disc brakes, clutches and learn the mechanisms behind them.

I am certain that my skills make me a perfect candidate for this position since I have a strong foundation in designing using various programs. I believe that I can provide significant contributions while learning a lot from the position. I would appreciate the chance to meet with you and discuss how my education, experience and skill would be a perfect fit for your organization.

Sincerely,

Marwan Al-Taweel

Enclosed: Resume

Marwan Al-Taweel

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Summary:

A Biomedical Mechanical engineering graduate self-motivated with excellent leadership, interpersonal communication, and teamwork skills. A hands-on creative person and a quick learner with a special interest in design. Always looking for ways to further my experience and hone my skills.

Education:

BASc in Biomedical Mechanical Engineering, University of Ottawa, Ottawa, ON **Sept 2013-Dec 2017**

Experience:

Salesperson **May 2017-August 2017**

Access Medical Est., Jeddah, Saudi Arabia

- Marketing medical and laboratory supplies to clinics, hospitals, etc.
- Working from office and on the road and issuing sales quotations, invoices, and payment receipts

Other Experience:

Under the Hood of the Car Workshop **May 2016-June 2016**

La Cite Collegiale, Ottawa, ON

- Taking apart and reassembling a four-stroke internal combustion engine, six-speed gearbox, and a clutch
- Learning how electric circuitry are wired within an automobile and fuel injection systems
- Use of different tools and devices to diagnose faulty mechanical and/or electrical components and how to fix them

Lower Limb Exoskeleton

Sept 2016-Dec 2016

University of Ottawa, Ottawa, ON

- Design a fully mechanical (no electrical components) lower-limb exoskeleton aimed at improving the gait of elderly users with limited walking or weak joints
- Parameterize design so that it can be changed based on the dimensions of the user of the device
- Analyze forces and moments provided by the device via modeling software to determine its contribution in terms of providing moments for walking

Ex-vivo Lung Perfusion Device (EVLN)

Feb 2017-April 2017

University of Ottawa, Ottawa, ON

- A device that will maintain a lung outside of the body, while the organ is waiting for transplantation
- Maintains lung at optimal conditions for up to 12 hours, including perfusion, respiration and body temperature

Wearable Smart Glove for Monitoring Dexterity Rehabilitation of Stroke Patients

Jan 2017-March 2017

University of Ottawa, Ottawa, ON

- A simple wearable device that employs various sensors to measure and keep track of ROM
- Design targets patients that are regaining dexterity and helps strengthen and monitor their therapy process

Skills:

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|----------------------|--------------------------|----------|-----------|
| • Solidworks | • Star CCM+ | • Matlab | • C |
| • Project Management | • Research & Development | • Java | • Autocad |