Diego Gonzalez
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March 14, 2018

30 Forensic Engineering
40 University Avenue
Suite 800
Toronto, ON M5J1T1

It is with keen interest that I apply to the Transportation Engineer position with you at 30 Forensic Engineering. Growing up, I had always been interested in car mechanics, but my interests have since expanded into road infrastructure due to growing issues with traffic congestion. This, combined with a strong desire to improve life pushed me into starting my Biomedical Engineering degree at the University of Guelph. It was during the final year of my Bachelor's degree that I came upon the driving simulator at the University of Guelph, and pursued a Master's degree in turning characteristics and muscle activation levels in fixed-base vs dynamic driving simulators for both urban and rural driving.

While being a research assistant at the University of Guelph, I took on the role of Lead Project Coordinator. This project investigated a variety of factors in driving behaviour including the bracing response, brake reaction time, driving kinematics, eye tracking and physiological responses to unexpected hazards in virtual roads designed to closely resemble city and suburban driving in the Mississauga area. Throughout my work experience I have developed positive relationships with both customers and vendors by providing high quality customer support with quick turnaround times. With a thorough understanding of biomechanical systems and strong communications skills, I have been able to author and co-author a number of journal articles and conference papers.

I consider 30 Forensic Engineering not only innovative but also an ideal opportunity to a prospective engineer, and I am confident that my drive **a**nd skillset put me in a great position to make a profound and immediate contribution to your team. I look forward to the opportunity to communicate further regarding this position.

Sincerely,

Diego Gonzalez

Highlights of qualification

- Part take in personal house renovations and remodeling
- Bachelor's degree in Biomedical Engineering; Masters of Engineering with graduate courses focused on mechanical and control systems
- Ability to effectively lead diverse groups in challenging environments while developing and maintaining positive team relationships
- Strong time management skills
- Ability to work efficiently without supervision and as a part of a team in fast-paced environments
- Fluent in English and Spanish

EDUCATION

M.Eng. **Biological Engineering with Honours** May 2015 – December 2017
University of Guelph, Guelph, ON | *Advisor: Michele Oliver*
Studied differences in head mounted devices use in static vs dynamic driving simulators

B.Eng. **Biomedical Engineering with Honours** September 2010 – April 2015
University of Guelph, Guelph, ON

SOFTWARE

Advanced proficiency in Microsoft Office; Nexus Motion Capture Software; SolidWorks; AutoCAD; MATLAB; LabView; ANSYS Workbench; Knowledge in Pro/Engineer; Maple; C/C++; Python; Completed EHS Courses: WHMIS, Laboratory Safety, Competent Supervisor Awareness and Due Diligence, Worker Health and Safety Awareness

WORK AND TEACHING EXPERIENCE

Site Manager | Excelsior Design and Supply*, Brampton, ON* Summer 2013 – Summer 2014

- Communicated directly with costumers
- Supervised and transported contracted staff in the company vehicle
- Ensured all the required working materials/tools were available at the working site through weekly inventory
- Oversaw a $500 weekly budget while maximizing savings by implementing an end of the week material/tools inventory

Undergraduate Researcher Assistant | *University of Guelph, Guelph, ON* September 2015 – December 2015

- Conducted pre/post Simulation Sickness Questionnaires to ensure participant's safety
- Outfitted participants with Electromyography Electrodes and VICON reflective markers
- Utilized SCANeR Studio and VICON's NEXUS Motion Capture to capture data to process in MATLAB

Research Developer | *NGTronix, Guelph, ON* September 2015 – September 2016

- Lead researcher on tonic vibrations as an innovative method to improve muscle health
- In charge of developing a product that would use vibrations as an alternative method for muscle therapy
- Tasked with market research, and direct research approaches to find business partners and potential consumers

Graduate Teaching Assistant | *University of Guelph, Guelph, ON* January 2016 – April 2017

- Designed, supervised and taught tutorials, labs, and extra help sessions
- Invigilated and evaluated examinations, tests, and assignments
- Taught students MATLAB as well as how to safely use lab equipment
- Provided guidance for individual projects, lab reports, and assignments
- Created study notes for midterms/final exams in order to further help students
- Helped multiple groups of students integrate a variety of sensors for their projects
- Resolved timing and group conflicts

Engineering Biomechanics January 2016 – April 2016

Bio-instrumentation Design September 2016–December 2016

Engineering Biomechanics January 2017 – April 2017

Graduate Researcher | *University of Guelph, Guelph, ON* May 2017 – August 2017

- Developed driving simulations within SCANer Studio
- Created a motion capture market set to accurately track upper body movement
- Optimized motion capture camera angles and positions
- Worked independently with private clients and members of the public

Account Coordinator | *WEBLINKS MDS, Toronto, ON* September 2017 – Present

- Set up client accounts through requested websites
- Minimized company resources while effectively maximizing workload output
- Set up and managed several media accounts for several clients
- Followed up with any client's complaints to ensure any problems were effectively resolved

Completed Graduate Courses

- Neuro-Fuzzy & Soft Computing Systems
- Advanced Control Systems
- Introduction to Machine Learning
- Soft Tissue Mechanics
- Research Methods in Bioengineering
- Engineering Leadership
- Finite Element Methods
- Mechanical Systems Design
- Optimization Techniques

PUBLISHED WORKS

JOURNAL ARTICLES

- Comparison of Wrap Around Screens and HMDs on a Driver's Response to an Unexpected Pedestrian Crossing Using Simulator Vehicle Parameters (Published –Co-author)

CONFERENCE PAPERS

- Comparison Between 90 Degree Turn Characteristics When Using a Head-Mounted Display Versus 300-Degree Wrap Around Screens in a Fixed based Driving Simulator (Author)
- Muscle Activity Differences Between Oculus Rift and Wrap Around Screens During Turning Manoeuvers in a Full Size, Fixed Base Driving Simulator (Co-Author)
  Preliminary Comparisons Between Driver Responses to Unexpected Pedestrian Crossings When Using Head- Mounted Display Versus 300 Degree Wrap Around Screens in a Fixed-Base Driving Simulator (Co-Author)

VOLUNTEERING EXPERIENCE

Engineering Building Tour Guide | *Graduate Representative* January 2017 – June 2017

- Personally guided potential collaborators/investors, currents partners and University of Guelph's Graduate committee board members biological, mechanical, and robotic laboratories

Guelph Innovations Society | *Past Member* December 2013 – June 2015

- One of the first members of the Guelph Innovations Society during undergraduate studies. Helped composed constitutions, policy manuals, training manuals, safety sheets, and inspection forms
- Managed and directed club members in performing club duties

PERSONAL

Portaged multiple times in Algonquin Park; Take a personal interest in helping start-up companies; Active soccer and volleyball player