Benjamin Duo

(647) 868 8758 • ben.duo99@gmail.com • linkedin.com/in/benjamin-duo • benjaminduo.me

Skills

- Proficient: SolidWorks, AutoCAD, Rapid Prototyping, 3D Printing, DFA, DFM
- Experienced: NX, Electrical Debugging, Injection Mold Design, Extrusion Design Machining, GD&T

Education

University of Waterloo Sept 2017 – Apr 2022

Candidate for Bachelor of Applied Science – Honours Mechatronics Engineering, Minor in Management Science

- Cumulative GPA: 3.7/4.0

Experience

University of Waterloo — Waterloo, ON

Senior Online Engineering Assistant — May 2021 – Aug 2021

- Directed the development of engineering department educational tools in collaboration with professors by leading the development of the project, presenting progress, and managing other students
- Conceptualized digital twin methods between CAD and ANSYS models for easier analysis of CAD assemblies

Able Innovations — Toronto, ON

Mechatronics Engineer Intern — Jan 2021 – Apr 2021

- Designed dynamic mechanisms for the Alpha platform using root problem diagnosis and prototyping
- Eliminated the jamming error of a pin-lock mechanism that occurred 90% of the time during initial testing

Nova Institute — Mississauga, ON

Electrical Engineer Intern — June 2020 – Aug 2020

- Researched usage and behaviour of dielectric elastomer generators to passively generate electricity
- Prototyped proof of concept circuits to validate the technology and test different materials

KPM Power Inc — Toronto, ON

Mechatronics Engineering Co-op — Sept 2019 – Dec 2019

- Developed KPM's initial forklift lithium-ion battery prototype into detailed design concepts
- Initialized battery monitoring system project to provide live data on battery health and stats for fleet monitoring

Miovision — Kitchener, ON

Manufacturing Test Engineer Co-op — Jan 2019 – Apr 2019

- Coordinated with the manufacturing and engineering departments to make improvements to the manufacturing process by finding new components from CMs and creating better fixtures
- Reduced production time of *Scout* cameras by 50% through manufacturing process improvements, resulting in a 60% deduction in costs by improving the product assembly methods

Extracurriculars

Bean-K9 Robot Dog – Final Year Engineering Project — Waterloo, ON

Project Manager, Mechanical Team Member — May 2021 – Current

- Designed a quadruped robot to navigate farms and alert farmers for the presence of coffee rust
- Led team discussions to conceptualize the robot to meet constraints and criteria of the project

University of Waterloo Alternative Fuels Team — Waterloo, ON

Mechanical Team Member — Jan 2017 – Aug 2019

- Created part mounts to attach HV electrical components to a Chevrolet Camero to turn it into a hybrid for the Ecocar 3 challenge

Interests Painting • Digital Art • Piano • Guitar • Volleyball