Dominic Li

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EDUCATION

Queen's University B.A.Sc. in Mechanical Engineering Kingston, ON | Expected Apr 2027

- Laboratory experience: Material Properties, Welding, CNC Machining, Control Systems and Circuits, Fluid analysis.
- Relevant courses: Thermodynamics I, Solid mechanics II, Fluid dynamics I, Mechatronics, Numerical Computation.

WORK EXPERIENCE

Mechanical Engineering Intern Toromont Cat | Toromont Remanufacturing Bradford, ON | May 2025 – Present

- Joined Toromont Remanufacturing's process engineering department for my 16-month co-op term.
- Regularly communicated with Caterpillar to document and implement best practices to Toromont's remanufacturing process.
- Worked on large-scale industrial projects requiring coordination of contractors and product suppliers to meet precise deadlines and budget requirements. Projects such as engine testing stands and dynamometer cell coolant plumbing.
- Designed organizational systems and custom tooling to address various safety and productivity concerns.

Bailiff Clerk, summer co-op City of Toronto | Revenue services North York, ON | May 2024 – Sep 2024

- Processed and filed warrants for properties with outstanding payments, ensuring accuracy and compliance
- Worked extensively with Excel, bookkeeping incoming payments, credits, and balances of accounts.
- Developed an Excel VBA macro that streamlined overdue account processing for 200,000+ entries, improving efficiency.
- Handled administrative tasks including inbox management, call redirection, and processing cheques and mail.

Department coordinator Granite Club | Camp Granite Toronto, ON | Jun 2023 – Sep 2023

- Head coordinator for the tech department of Camp Granite. Planned out and conducted coding lessons and activities.
- Instructed the fundamentals of computational logic and programming using Scratch to children aged 8 to 12.
- Demonstrated effective leadership by assembling a team of counsellors that fostered an engaging learning environment.

Construction Planner McMinten Radiant Insulation Toronto, ON | Jun 2022 – Sep 2022

- Installed insulation panels and heated piping to basements floor of homes.
- Designed and drew pipe layouts on floor plans. Conducted pressure checks and relayed data to other sub-contractors.
- Gained experience with power tools such as handheld jacks, table saws, and angle grinders.

DESIGN PROJECTS

Please check out my online portfolio for most up to date resume and project history: dominicli.ca

Queens Baja SAE Team Project Lead Sep 2022 – Apr 2025

- Designed and manufactured the gearbox of the 2024 competition vehicle. Lead the anti-roll bar project for 2025.
- Manufactured high-loading components under industry standards of tolerances (± 0.001in) and factor of safety.
- Manufacturing techniques used include milling, lathing, and MIG welding. Extensive use of Ansys and Mastercam software.
- Increased gear reduction ratio from 5.5 to 6.7 compared to 2023's design.
- Custom Python scripts created to aid pitch and mesh angle calculations for an iterative design approach.

RC Buggy Personal Project Sep 2024

- 3D printed off-road RC vehicle, designed, manufactured and assembled personally.
- Tested with SolidWorks' static FEA tools and Simulink to simulate control response.
- Minimal components were outsourced, mostly electronics. All load and torque bearing components such as gears and axels were Printed using PETG and PLA from my personal printer.
- Design features include active suspensions and generative topology which optimizes mass to strain ratio of parts.

SKILL SUMMARY

Coding proficiency: C/C++/Arduino, MATLAB/Simulink/Symbolic TB, Python Notebook, Excel VBA, HTML, CSS Framework.
Software proficiency: SolidWorks/FEA sim/Topology optimization, Fusion360, ANSYS, Mastercam
Language proficiency: Fluent in English and Cantonese, proficient in Mandarin.