

Luxan Jeyarajah

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Passionate Mechatronics Engineering student driven by creativity and innovation. Skilled in CAD modeling, prototyping, and user-centered design, with experience leading hands-on engineering and digital design projects. Dedicated to developing functional and impactful solutions to real-world problems.

EDUCATION

Ontario Tech University — Bachelor of Engineering (2023 – 2027)
Mechatronics Engineering

PROJECTS & COMPETITIONS

Tremor Reducing Mouse (DESIGN COMPETITION)

- Led a four-member design team to develop a handheld assistive device that stabilizes user motion for individuals with hand tremors.
- Oversaw the complete product development cycle, concept ideation, CAD modeling (SolidWorks), prototyping, and testing.
- Integrated sensors and mechanical dampening systems to reduce vibration amplitude.
- Awards: 2nd Place – UOttawa Engineering Design Competition; Dean of Engineering Innovation Award.

Hand Press CAD Assembly

- Designed and modeled a fully functional hand press mechanism using SolidWorks.
- Produced detailed 2D drawings, exploded views, and motion animations to illustrate component interaction and mechanical motion.
- Applied design-for-manufacturing (DFM) principles to ensure assembly feasibility and structural integrity.

Rack and Pinion Mechanism Design

- Created a 3D model and performed motion simulation of a rack-and-pinion system to study linear-to-rotational motion conversion.
- Documented results and performance characteristics in a technical design report.

Experience

Web Designer – 3D Sound | Toronto, ON | Aug 2023 – May 2024

- Designed and developed an interactive voting platform for live events, integrating UX/UI principles with backend logic.
- Applied front-end technologies (React, HTML, CSS, JavaScript) and MySQL for data handling and responsive design.
- Collaborated with creative and technical teams to prototype, test, and refine user interfaces for optimal engagement.
- Strengthened understanding of human-centered design and system integration — key elements in engineering design processes.

Co-Founder – Inspome | Toronto, ON | 2023

- Co-founded a startup focused on creative, interactive digital experiences.
- Led a small development team through design sprints, system prototyping, and iterative testing cycles.
- Applied design thinking methodologies to improve usability, accessibility, and overall user experience.
- Managed the product design pipeline, translating conceptual ideas into functional prototypes.

Production Worker – General Motors | Oshawa, ON | May 2022 – Sep 2022

- Assembled and validated mechanical sub-systems under ISO standards in a high-volume manufacturing environment.
- Supported engineering design modifications and process improvements, reducing production defects by 15%.
- Gained hands-on experience with mechanical design principles, quality assurance, and large-scale automation systems.

Event Designer & DJ – 3D Sound / Flytwice | Toronto, ON | 2022 – 2024

- Engineered and implemented event setups combining lighting, audio, and layout systems for 1,000+ attendees.
- Applied design and spatial planning principles to optimize technical layouts for performance and efficiency.
- Coordinated with multidisciplinary teams to troubleshoot and enhance real-time system reliability.
- Built practical experience in technical design, project coordination, and system integration under pressure.

SKILLS

Design & CAD Tools: SolidWorks, Onshape, AutoCAD, 3D Printing, Machine Shop Operation

Programming & Software: Python, Java, C, C++, MATLAB, SQL, HTML, CSS, JavaScript, React, MySQL

Software & Tools: GitHub, VS Code, Adobe Photoshop, Microsoft Office, Slack

Other Skills: Technical Writing, Project Management, Rapid Prototyping, UX/UI Design