

Dhairya Goel

2B Mechanical Engineering Student at University of Waterloo

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Portfolio: www.autowizsec.com/portfolio

Mechanical Engineering student seeking Co-op opportunities to apply skills in design analysis and innovation.

Experience

Product Engineering Intern

May 2024 – Aug 2024

Slacan Industries, Brantford, ON, Canada

- Created 3D models and drawings of parts using Solidworks PDM and AutoCAD
- Developed & updated engineering drawings for product design, sales, production and customers
- Operated 3D scanner to scan parts for new development of new products
- Worked on long-term projects; performed tensile and torsion tests and prepared test reports
- Assisted the department with maintain website catalogue, created reports and updated routing

Mechanical Lab Assistant

Sep 2023 – Dec 2023

P3T Lab- Woodbridge Foam Corporation, Woodbridge, ON, Canada

- Perform various mechanical tests to ensure company and federal/provincial standards are met
- 3-Point Bend Test and 4-Point Bend Test (SAE standards and ISO standards)
- Tested flammability of Foam and Velcro, especially, car seats to ensure safety of passengers
- Tensile and compressive testing at normal conditions and at elevated temperatures.
- Fatigue, Hardness and Odor Testing of foam at various temperatures and humidity

Quality Assurance Intern

Jan 2023 – Apr 2023

Almag Aluminum, Brampton, ON, Canada

- Prepared samples of aluminum extrusions and audited them for quality standards
- Defined dies and scanned extruded samples under Ascona, optical measurement device
- Designed and 3D printed gauges on Solidworks to examine parts faster at production line
- Documentation for PPAP requests, Non-Conformance, customer returns and yield losses

Assistant Supervisor

Jul 2021 – Aug 2021

AmbaShakti Udyog Ltd.- Steel Plant, Gwalior, MP, India

- Proposed rolling 9-meter billet: increased production by 0.25%
- Recorded and analyzed data to formulate maintenance proposals
- Attended training courses about the process of casting molten metal & rolling TMT bars.
- Acquired skills in teamwork, data acquisition and analysis

Projects

- UW Baja SAE: Designed and machined components for the car and assisted in its fittings. Participated in the Baja SAE Michigan 2024 competition.
- Built and programmed a Farming Robot in ROBOTC to plow soil, plant seeds using color tags
- Designed and created Electro-magnetic arcade crane to lift magnetic objects (up to 20g)
- Assisted in developing an emergency case prototype at Waterloo Engineering Competition
- Crafted a Keychain using aluminum in the Machine Shop using lathe and milling machine
- www.autowizsec.com: Designed the website and published blogs on technology
- Built Hydraulic lift, using concepts of basic fluid mechanics, to elevate objects up to 1 ft

Certifications

- Mastering Programming with MATLAB at Vanderbilt University Oct 2023
- 3D Printing and Laser Cutting by WATiMake May 2023
- CAD and Digital Manufacturing Specialization by Autodesk Aug 2022
- WHMIS- 2015 and UW Engineering Machine Shop Course Sept 2022

Technical Skills

- 3D Modelling in Solidworks PDM
- Drafting with AutoCAD
- Modelling with Fusion 360
- MATLAB
- Basic knowledge of C++ and ROBOTC
- Google Workspace
- Microsoft Office Suite
- Metal Fabrication
- Engineering Drawings and GD&T

Education

Bachelor of Applied Science

Mechanical Engineering Honours

University of Waterloo, ON

September 2022 - April 2027

- Received President's Scholarship

Core Competencies

- Analytical and Critical Thinking
- Teamwork and Collaboration
- Planning and Coordination
- Interpersonal Communication

Awards and Honors

- School Head Boy: Delhi Public School, Gwalior
- Joint Entrance Exam: 95.03 %ile
- Unified Council: All India Rank- 32 NSTSE (Science Olympiad)
- Merit: Essay competition organized by South Korean Embassy
- UNEP: India's International Movement to Unite Nations (IIMUN)

Co-Curricular Activities

- Distinction in Piano ABRSM, UK
- Played squash at Club level tournaments

Volunteering

- Distributed medical supplies in the Government Hospital during the COVID-19 pandemic (2021)
- Organized camp in school to specially abled kids to sell their handicrafts (2019)