

HUNZALA RAJPUT

hunzala.rajput@mail.utoronto.ca | (+1) 647-393-3912 | [LinkedIn](#) | [Website](#)

EDUCATION

University of Toronto, Toronto, ON

Bachelor of Applied Science (BASc) Mechanical Engineering

2020 - 2026

Double Minor in Artificial Intelligence, and Robotics & Mechatronics

TECHNICAL SKILL SET

CAD: SolidWorks, CATIA V5, Siemens NX, AutoCAD, Rhino, Fusion 360, ANSYS

Design: structural FEA, GD&T, DFM/DFA, CAE validation, gearboxes, sheet metal design, surface modelling

Programming: Python, MATLAB, HTML, CSS

Fabrication: 3D printing, welding, soldering, manual machining

WORK EXPERIENCE

Kiwi Charge (Startup), Toronto, ON

Hardware Engineering Intern

Sep 2025 - Present

- Supporting hardware development for EV autonomous charging infrastructure in a fast-paced startup environment.

Multimatic Inc., Toronto, ON

Plant Engineering Intern

May 2025 - Sep 2025

- Developed 3D printed jigs; supported automation, reducing assembly cycle time by 11% on the Mustang GTD pilot line
- Managed BOM of 1000+ parts and supplier coordination between Ford, design, and manufacturing teams
- Implemented in-process fixture redesigns improving repeatability and alignment accuracy by 0.3 mm

Xtract One Technologies, Toronto, ON

Mechatronics Engineering Intern

Jan 2025 - May 2025

- Designed and assembled production-ready Xtract One Gateways, contributing to the hardware development of next-gen AI-powered threat detection systems
- Developed and fabricated custom PCB test jigs to reduce process time between board tests by 67% and enable scalable deployment of 1000+ units by external manufacturers
- Optimized mechanical layout for airflow, mechanical stability, and service access within electronic enclosures

Tesla Inc., Palo Alto, CA

Product Engineering Intern

Jan 2024 - May 2024

- Automated vehicle software diagnostic tests for chassis systems cutting troubleshooting time by ~9%
- Root-caused high-severity NVH issues in steering/suspension/brakes; implemented design countermeasures reducing repeat failures by >36%
- Coordinated with service, design and firmware teams to integrate automated service detection

University of Toronto Formula SAE Racing, Toronto, ON

Steering Systems Lead | Mechanical Advisor

Sep 2021 - Present

- Designed first-ever autonomous steering rack & pinion (c-factor = 120 mm/rev) validated for 1000 hr equivalent life
- Used analytical methods & gear calculations in KissSoft to determine optimal rack ratio (4.8:1); designed in SolidWorks & Rhino
- Reduced steering torque by 46% via suspension geometry redesign and MATLAB lap time simulations
- Led 5 member subteam in implementing the first fully autonomous steering system; achieved 68% lateral compliance reduction & 4% mass savings through topology-optimized packaging
- Integrated Maxon and Cubemars motor driven actuation (120 rpm steering rate) with closed-loop control for driverless testing
- Optimized mechanical components, such as bearing holders, sprockets and rack mounts using Finite Element Analysis (FEA)

Signify Canada, Montreal, QC

Product Manufacturing Intern

Sep 2023 - Dec 2023

- Introduced inline IPT testing for LED driver assembly, cutting cycle time by 11% and improving yield by 5%
- Redesigned luminaire brackets improving casting efficiency by 6% and reducing tool wear rate by 9%

Honda Manufacturing, Alliston, ON

Manufacturing Associate

May 2022 - Jun 2022

- Assembled Honda CRV every 60 seconds with 98% quality compliance while strictly following operational standards
- Specialised in installing engine, AWD/RWD control modules, harnesses, etc.; reduced side curtain airbag installation time by 23%