

# Ian Seremet

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www.ianseremet.com

## **EDUCATION:**

University of Minnesota - *Bachelor of Mechanical Engineering* | Minneapolis, MN May 2026

- Involvement: Gopher Motorsports (FSAE), McAlpine Research Group, CSE Mentor Program, ASME, Mechanical Engineering Ambassadors

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## **SKILLS:**

- Technical Skills: Finite Element Analysis (FEA), Solidworks CAD, Creo Parametric, Ansys, Rapid Prototyping, 3D-Printing, Microcontrollers, Autodesk CAM, C++, Injection Molding, CNC, Sheet Metal

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## **WORK EXPERIENCE:**

UMN Undergraduate Research (UROP)- *Undergraduate Researcher* | Minneapolis, MN August 2024 - Present

- Developed and authored a project proposal; successfully secured a research grant
- Utilized machine learning to train a defect detection algorithm for conformal 3D-printing
- Developed a robust image preprocessing pipeline to optimize training data for a computer vision model

The Toro Company - *Advanced Manufacturing Intern* | Bloomington, MN May 2024 - August 2024

- Updated tooling for nesting assemblies on autonomous guided vehicles (AGVs)
- Validated hand calculations using FEA to ensure safety factors met design standards.
- Improved a battery testing tool with CAD redesign and material updates for production
- Collaborated with Toro R&D to conceptualize a new product design

Benchmark Electronics - *Product Engineering Intern* | Rochester, MN May 2023 - August 2023

- Applied DFM and DFA principles to improve manufacturability and reduce assembly time.
- Designed and implemented cable management fixture
- Automated assembly work instructions using Python and Microsoft VBA

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## **PROJECTS:**

Drone Protection Device - "*Drone Airbag*" September 2024 - Present

- Designed an airbag system to protect drones during crashes into objects and water
- Conceptualized a deployment mechanism powered by microcontrollers, accelerometers, and pressure sensors
- Optimized the design for minimal weight and maximal reliability

Minnesota State Science Fair - "*Automation of Ike Jime*" September 2020 - February 2021

- Developed an image recognition-based automation process using Google's Vision API
- Utilized a Raspberry Pi to precisely control linear actuators and a camera.

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## **AWARDS & CERTIFICATIONS:**

- 3M Most Promising Emerging Scientist: 2021
- HR Imaging Partners Scholarship: 2022
- IPC J-STD-001 Certification: 2023
- IPC-A-610 Acceptability of Electronics Assemblies Certification: 2023
- UROP Scholarship: 2024