Vinh Ha

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EDUCATION

Gonzaga University Spokane, Washington
Bachelor of Science: Mechanical Engineering May 2027

- GPA: 3.89 | Dean's List | Fall 2023, Spring 2023, Fall 2024, Spring 2025, Fall 2025
- Honors: Tau Beta Pi Engineering Honor Society (Top 8% of Junior Class)
- Relevant Coursework: Mechanical Design, Machine Design, Manufacturing Processes, Fluid Mechanics, Thermodynamics, Heat Transfer, Mechanics of Material, Python Programming, Circuit Analysis, Finite Element Analysis

EXPERIENCE

Applied Materials Austin, Texas
Mechanical Engineer Intern (Automation) May 2026 – September 2026

- Designed and rapidly prototyped a machine vision inspection fixture in Autodesk Inventor for three Metal Deposition Product chamber variants, incorporating repeatable camera positioning, controlled lighting, and error-proofing features.
- Programmed and validated a Universal Robots collaborative robot in RoboDK for automated leak testing, confirming reachability and developing collision-free paths for physical deployment.
- Deployed and validated Autonomous Mobile Robots for cleanroom material handling through qualification testing, route setup, safety controls, and cross-functional coordination.
- Developed a two-stage Neuro-T machine vision workflow combining object detection and image classification to automate pin-alignment pass/fail decisions and improve quality traceability.
- Integrated pressure-decay testers with Tulip Edge Devices using Node-RED to automate quality data collection and replace paper records across Etch and Dielectric Deposition product groups.

SCAFCO Steel Stud Company Spokane, Washington
Manufacturing Engineer Intern May 2025 – August 2025

- Performed time studies and fault analysis on robotic assembly line; identified a magazine feeding issue reducing jams by 70%
- Analyzed steel coil usage to design a consolidated layout that cut crane travel time and improved operator access.
- Conducted dimensional analysis of 100+ steel stud samples with calipers; developed an Excel macro to automate tolerance parsing, enabling faster evaluations and roughly $57,000 in annual material savings.
- Authored troubleshooting guides for roll forming machines, detailing diagnostic workflows, controller interface checks, and interlock procedures, leading to less routine operator errors.

Gonzaga University – Herak Manufacturing Technology Center Spokane, Washington
Manufacturing Lead August 2024 – Present

- Execute complex fabrication using 3-axis Haas CNC mills, lathes, MIG welders, plasma cutters, 3D printers, and power tools.
- Supervise and train 50+ students and new employees on machining fundamentals and workshop safety, enabling independent project completion and shop compliance.

Gonzaga Society of Automotive Engineers Spokane, Washington
Club Member & Baja Car Contributor August 2024 – Present

- Applied machining and fabrication skills to build components for the Baja SAE competition vehicle.
- Collaborated with team members to troubleshoot assembly challenges and support iterative design improvements.

PROJECTS

- **Robotic Arm:** Designed and built a 4 DOF robotic arm using MG90S servo motors and 3D-printed casing, implementing inverse kinematics and Arduino based control for precise end effector positioning.
- **SolidWorks Piston Assembly and FEA:** Recreated a complex piston sub-assembly from caliper measurements, performed Finite Element Analysis for thermal expansion, shear stresses and combined into animated assembly.

SKILLS

- **Technical:** SolidWorks, Inventor, Siemens NX, AutoCAD, Fusion 360, Ansys, GD&T, Python, Six Sigma, RoboDK
- **Hands-on:** CNC Machining, MIG/TIG Welding, Soldering, Part Inspection, Rapid Prototyping, Mechanical Assembly