

THOMAS (TOM) R. ZIMET

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EDUCATION

Stanford University | Stanford, CA

April 2024 - Present

Master of Science, Mechanical Engineering

- GPA: N/A/4.00

University of Washington | Seattle, WA

September 2018 - June 2022

Bachelor of Science, Mechanical Engineering

- Cumulative GPA: 3.59/4.00, Major GPA: 3.70/4.00
- Dean's List — 7 quarters, Direct to College (early entrance program), CSWA Certified, FE Mechanical Certified
- Activities: Phi Delta Theta (DEI, Philanthropy Chairs), UW Engineering Innovations in Health, Husky Robotics, WOOF3D, Japanese Student Association, ME Students Against Racism, Intramural Sports

PROFESSIONAL EXPERIENCE

Fuel Cell Test Engineer (GPD TRACK) | General Motors | Pontiac, MI

June 2023 - Present

- Manage, operate, and troubleshoot development, validation, and applications testing on hydrogen fuel cells
- Lead new test stand commissioning efforts, creating INCA experiment UI layers for future commissioning
- Develop a fuel cell stack tracking resource to visualize value streams and reinforce quality gates
- Utilize design for six sigma to create a consolidated lab dashboard in Power BI to increase clarity and efficiency

Equipment Development R&D and Engineering Co-Op | Starbucks | Seattle, WA

June 2022 - September 2022

- Designed, manufactured, and assembled a precision syrup dispensing machine
- Constructed and designed a custom ice dispensing machine to increase efficiency and reduce strain on baristas
- Assisted the electronics team by modeling and 3D printing custom electronic housings
- Modified hydraulic systems to improve performance of coffee machines in stores with limited water pressure

Manufacturing Engineering Intern | Digital Control Inc. | Kent, WA

June 2021 - September 2021

- Conducted a product analysis and proposed redesigns that reduced weight by 25%
- Increased worker safety by skeletonizing a fixture to reduce weight by 64% while preserving crucial tolerances
- Fabricated 7 different fixtures to eliminate certain failures and shorten lead time by 17%
- Produced an emergency fixture in 2 days that salvaged 5,000 defective parts and saved a week of delay
- Crafted a fixture that removed need to manually secure a part to decrease soreness and fatigue in technicians
- Performed FDM 3D printer upgrades and maintenance while printing over 300 parts

ADDITIONAL EXPERIENCE

Research Engineer | Transformative Robotics Lab | Seattle, WA

July 2020 - June 2022

- Created a hopping robot that can adjust jump height and frequency by varying spring stiffness through twisting a handed-shearing auxetic (HSA), integrating motors, encoders, COTS parts, and custom parts
- Optimized HSA design, increasing bearable load by 13% while maintaining desired nature
- Performed FEA analysis and Instron testing to collect HSA data used to program the robot
- Modeled compliant mechanisms with SolidWorks and tested performance with Ansys to enhance function
- Reduced test time by 20% by designing an easily adjustable compliant straight-line mechanism tiling system
- Constructed 5 different mechanical metamaterials by strategically changing straight-line mechanism geometry

Mechanical Engineer | Husky Robotics | Seattle, WA

October 2020 – September 2021

- Drafted and simulated tread designs to maximize durability and manufacturability and minimize mass and cost
- Optimized the molding and casting process for the treads to reduce silicone use by 85%
- Collaborated with other teams to remain below rover weight limit and to reach suspension requirements

SUMMARY OF QUALIFICATIONS

- Mechanical design skills including DFA, DFM, GD&T, and product development
- Proficient in SolidWorks, Fusion 360, AutoCAD, Ansys, Python, MATLAB, Power BI, and fluent in Japanese
- Machine shop certified, including FDM & SLA 3D printing, laser cutting, milling, lathing, and CNC routing