THOMAS (TOM) R. ZIMET

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EDUCATION

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), Japanese Student Association, MESAR, IMA Sports

PROFESSIONAL EXPERIENCE

Fuel Cell Test Engineer (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 / PROJECTS

Mechanical Engineer | IMPULSE | Seattle, WA *September 2021 - June 2022*

- Made a wearable pulse detection device to address clinical needs as pitched by a UW Medicine doctor
- Rapidly prototyped medical device housing using SolidWorks and 3D printing, producing 2 iterations a week
- Conducted stakeholder interviews and performed market research to hone core functions and need statement

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 (Chassis) | Husky Robotics | Seattle, WA *October 2020 - September 2021*

- Designed and simulated different wheel designs using SolidWorks and Ansys to maximize durability and minimize weight and cost while maintaining manufacturability
- Improved the tread molding and casting process to reduce silicone usage by 85%

SUMMARY OF QUALIFICATIONS

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