Chloe **Olson**

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Education

B.S. Mechanical Engineering & Minor Applied Math, University of Washington, GPA: 3.74 *Sept 2022 – June 2026*

- Holloman Best Idea for Addressing Health Access and Disparities Award, Dean's List (8x), Annie Masters Scholarship, Granite Construction's Character Matters Scholarship

A.A. Integrated Studies, Cascadia College & Woodinville High School, GPA: 4.0 *Sept 2020 - June 2022*

- Dual enrollment via Running Start Program, graduated Valedictorian

Skills

Software: CAD Software (SolidWorks & Rhino 3D), FEBiO (Finite Element Analysis), Minitab, 3D Slicer, Python, MATLAB, R, Arduino, Microsoft Office Suite, Windchill, Azure DevOps, Visual 3D, Vicon Nexus, LaTeX

Manufacturing: 3D Printing, Instron Testing, Electrical System / Hardware Assembly, Lathe, Mill, Soldering

General Skills: Concept Generation and Optimization, Analytical Problem-Solving, Communication, Collaboration, Leadership

Engineering Experience

Philips Oral Healthcare

Systems Engineering Co-Op *September 2025 – Present | Seattle, WA*

- Verifying and validating documentation for the commercial release of Sonicare toothbrush product line, authoring 80+ test records with Windchill, and Azure DevOps, and statistical analysis in Minitab
- Developing particle imaging velocimetry (PIV) testing system to characterize fluid dynamics of oral irrigator devices
- Executing IQ/OQ/PQ protocols for new power toothbrush and oral irrigator test equipment, ensuring compliance with ISO 13485 quality system requirements
- Authoring 19 updated design verification protocols and 6 equipment specifications to improve test efficiency and regulatory alignment

Philips Oral Healthcare

Systems Engineering Intern *June 2025 – September 2025 | Seattle, WA*

- Re-engineered high speed video (HSV) verification testing for oral irrigator products, improving measurement accuracy by 70%
- Developed automated image analysis pipeline using Python/OpenCV (adaptive thresholding, contour detection, histogram equalization) to extract quantitative performance metrics from HSV
- Adapted deep learning segmentation (fine-tuned Meta SAM 2 model) to enable automated segmentation of thousands of HSV frames
- Drove cross-functional alignment between product development, functional development, verification/testing, and program management teams to establish standardized HSV measurement techniques

Center for Limb Loss and Mobility (CLIMB), U.S. Department of Veterans Affairs

Intern *June 2024 – May 2025 | Seattle, WA*

- Developed a sensor pad for plantar shear force measurement to prevent diabetic foot disease and presented my work at the CLIMB Young Investigators Symposium
- Designed and tested prototypes of the pad with Python algorithms, 3D modeling tools (Rhino 3D), finite element analysis (FEBIO), and engineering fundamentals to ensure product reliability, product verification, and risk management
- Collaborated with a cross-functional team to test braces for NBA players with a robotic gait simulator and cadaveric feet
- Used 3D Slicer to create 3D models from CAT scans, enabling data collection for NBA athlete ankle brace testing

Computational, Robotics & Experimental Biomechanics Lab

Undergraduate Research Engineer *Oct 2023 – May 2025 | Seattle, WA*

- Created a biomechanics data collection system using SolidWorks, inertial measurement units (IMUs), distance sensors, soldering, and electrical system/hardware assembly to conduct motion studies
- Conducted data analysis using Arduino and Microsoft Office Suite to research tripping biomechanics
- Developed a test method using passive optical motion capture, Visual 3D, and VICON Nexus to test prototypes

Bioengineers Without Borders – Prostheses

Design Engineer *Oct 2022 – June 2023 | Seattle, WA*

- Designed a 3D modular prosthetic socket using SolidWorks, ensuring proper dimensions and adaptability for children
- Researched affordable prosthetic designs and amputee walking gaits as part of a 10-member team
- Project recognized with the Holloman Best Idea for Addressing Health Access and Disparities Award

Leadership Experience

American Society of Mechanical Engineering

Networking Chair (2023-2025) *Oct 2022 – Sep 2025 | Seattle, WA*

- Organizing 2-3 quarterly networking events, connecting engineering students with industry leaders and professionals
- Demonstrating strong interpersonal skills, fostering professional development by facilitating student-firm interactions