

# Bailey Wu

Seattle, WA

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## EXPERIENCE

### Senior Tooling Design Engineer

June 2024 – Current

*The Boeing Company – Boeing Commercial Airplanes*

*Seattle, WA*

- Designed production and mechanical systems using CATIA V5, creating detailed 3D models, assemblies, simulations, and shop-floor drawings to support manufacturing execution.
- Conducted tooling stress analyses, including static/dynamic loading, free-body diagrams, tolerance stack-ups, and authored stress and validation reports.
- Managed tooling projects from concept through release, including full tool packages, supplier specifications, and fabrication oversight to meet customer requirements.

### Senior Materials & Process Engineer

August 2022 – May 2024

*Raytheon Technologies - Raytheon Vision Systems*

*Goleta, CA*

- Served as technical lead and SME for laser welding processes supporting high-reliability aerospace hardware, owning product development, qualification, and production sustainment.
- Performed materials characterization and metallurgical analysis to ensure joint integrity, reliability, and compliance with space and military standards.
- Oversaw capital equipment procurement and system-level specification development, balancing performance, cost, scalability, and long-term supportability.

### Semiconductor Process Engineer

March 2021 – August 2022

*Lockheed Martin - Missiles and Fire Control*

*Goleta, CA*

- Optimized semiconductor manufacturing processes, including precision alignment, wirebonding, additive manufacturing, vibration testing, and robot automation.
- Applied statistical process control methods and capability analysis to drive continuous improvement, increasing process capability and improving first-pass yield.
- Supported prototype builds, fabrication, and shop-floor implementation, providing engineering support through system deployment and product lifecycle management.

### Manufacturing Engineer

July 2018 – March 2021

*Raytheon Technologies - Raytheon Vision Systems*

*Goleta, CA*

- Supported manufacturing operations through First Article Inspections, work instruction development, technician training, and RCA/Lean/Six Sigma process improvements.
- Reviewed drawings, dispositioned non-conforming parts, coordinated with customers, managed procurement, and prepared program proposals using Earned Value Management.
- Led cross-functional Space product teams to ensure flight-qualified hardware met engineering and regulatory requirements for space environments.

## EDUCATION

### UNIVERSITY OF WASHINGTON

June 2025

Master of Science in Mechanical Engineering

*Seattle, WA*

### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

June 2018

Bachelor of Science in Mechanical Engineering

*Santa Barbara, CA*

## SKILLS

CATIA V5, SolidWorks, PTC Creo, ENOVIA, ANSYS, MATLAB, Python, Minitab, Mastercam