

Bailey Wu

Seattle, WA

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EXPERIENCE

Senior Tooling Design Engineer

The Boeing Company – Boeing Commercial Airplanes

June 2024 – Current

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

Raytheon Technologies - Raytheon Vision Systems

August 2022 – May 2024

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

Lockheed Martin - Missiles and Fire Control

March 2021 – August 2022

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

Raytheon Technologies - Raytheon Vision Systems

July 2018 – March 2021

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

Master of Science in Mechanical Engineering

June 2025

Seattle, WA

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

Bachelor of Science in Mechanical Engineering

June 2018

Santa Barbara, CA

SKILLS

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