

# CHIARA WU

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## EDUCATION

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### B.S. in Mechanical Engineering

Aug. 2022 - May 2025

California State Polytechnic University, Pomona | GPA: 3.38/4.0; *Dean's List Spring 2023 & Spring 2024*

## SKILLS

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SolidWorks, STAR-CCM+, MATLAB, Simscape, Python, GD&T, CATIA V5, Femap/NX NASTRAN

## WORK EXPERIENCE

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### Aerospace Systems Engineer, R&D | *Swift Engineering Inc.* | San Clemente, CA Sep. 2025 - Present

- Designing mechanical hardware & test fixtures for 3D printing & metals manufacturing in UAV applications using SolidWorks & CATIA V5.
- Troubleshooting UAV systems in flight testing environments under tight deadlines.
- Analyzing flight data & implementing solutions to improve telemetry and flight performance.
- Refining UAV models in Solidworks, optimizing meshes, & automating parametric design exploration of UAVs in CFD using STAR-CCM+.
- Streamlining CFD post-processing scripts to integrate data into aero database in MATLAB & Python.
- Performing structural analysis on critical components using FEMAP/NX NASTRAN.

### Intern | *NASA Jet Propulsion Laboratory* | La Cañada Flintridge, CA Jul. 2025 - Sep. 2025

- Developed & optimized a script to simulate diurnal thermal behavior of ice penitentes on Europa using E-THEMIS thermal model KRC in a Python-adjacent language.
- Ran cases using script with various geometries, latitudes, & viewing angles to quantify their effect on observed temperatures & compile criteria for the detection of ice penitentes on Europa.

## PROJECTS

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### Insulin Pump Mar. 2026 - Present

- Designing 2D fluid model of autonomous insulin pump using MATLAB Simscape.
- Designing hardware & PCB for insulin pump using Solidworks & KiCad.

### Vehicle Thermal Design | Pomona, CA

Mar. 2025 - May 2025

- Collaborated on design of a 2D thermal model of a moving vehicle with 5 distinct subsystems including fluid systems using MATLAB Simscape.

### Satellite Thermal Design | Pomona, CA

Mar. 2025 - May 2025

- Designed a transient 2D thermal model of a satellite with 9 distinct subsystems using MATLAB Simscape.
- Verified design requirements using hot, cold, & survival case.

### Biomechatronic Foot | Pomona, CA

Aug. 2024 - May 2025

- Designed toe mechanism composed of 3D printed 4-bar linkage, fasteners, gears, & rotary encoders for a self-balancing biomechatronic foot using SolidWorks & Autodesk Fusion360 in a team of 5.

### CubeSat | Pomona, CA

Sep. 2023 - Apr. 2025

- Led structural design & integration of a 1U satellite using SolidWorks in a multidisciplinary team of 10.
- Designed avionics mounts & selected film heater to maintain thermals.

## INTERESTS

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Tennis, Piano, Baking, Cooking, Swim, Dance, Art, Golf, Crochet, Badminton