

Freddie Jiang

Industrial designer + design engineer

LOS ANGELES, CA

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FREDDIEJIANG.ONE

I design hardware and then build it: scan the real thing, model against it, make the part, and check that it fits. My work spans motorsport aero, custom vehicle parts, precision instruments, and four consumer products on sale at Target and Amazon. Right now I am building Project Ground Truth, an AI-to-CAD pipeline that turns 3D scan data into usable CAD.

■ EXPERIENCE

Co-founder, design engineer · TraceHaus LLC, Pasadena

2025 - PRESENT

- Design engineering studio: 3D scanning, scan-to-CAD reverse engineering, prototyping. I lead projects from scan and CAD through prototype, fabrication and delivery across automotive, consumer and precision hardware.
- Project Ground Truth: AI-to-CAD pipeline that uses Claude to analyze scan data, find deviations and build usable CAD. Simulation stage (CFD / FEA) in development.
- Published case studies: two fiberglass hoods rebuilt as moldable CAD (0.58 mm skin RMS against the scan), and an engine bay packaging reference with 518 L of mapped free space.
- Work with CNC, composites and sheet metal partners; FDM and SLA printing in house.

Founding partner · Early-stage EV startup (confidential)

2024 - 2026

- Core member of a three-person team that built a full-scale electric vehicle prototype from scratch.
- Exterior design proposals, panelized body structures, and fabrication documentation used directly by the build team.

Product designer, internship · Munchkin, Van Nuys

AUG - DEC 2023

- Contributed to more than 15 programs across the baby product line; four products now on sale at Target and Amazon.
- Led two products from concept through tooling preparation: form, CMF, DFM and design intent.
- CAD assemblies and technical drawings for injection-molded and overmolded parts; worked with engineering through tooling constraints and change orders.

■ SELECTED PROJECTS

DRS wing system · Motorsport aero, time attack

2024 - 2025

- Drag-reduction rear wing for a time-attack car in the unlimited class, designed on 3D-scanned body geometry with no CAD to start from.
- CNC-machined 7075 aluminum uprights; track-tested and competition-validated.

Datum 7 FS-01 · Precision measurement toolkit, concept

IN DEVELOPMENT

- A family of measuring instruments designed as one system: form, mechanical layout, CMF and interface graphics. Working prototype next.

COZE · Cabin concept, personal project

2023 + 2025

- Premium cabin system for the Airbus A321 XLR: privacy, service flow and seating inside a narrow-body envelope, developed in two iterative stages.

■ EDUCATION

B.S. Product Design, Honors · ArtCenter College of Design, Pasadena

2020 - 2024

■ SKILLS

CAD	SolidWorks · Rhino · Fusion 360 · NX · Blender
VISUALIZATION	KeyShot · Adobe CC · Figma
PROTOTYPING	3D scanning and scan-to-CAD · FDM / SLA · CNC · laser cutting · sheet metal · composites
MANUFACTURING	Injection and overmolding · DFM / DFA · GD&T · CMF · supplier coordination · tooling preparation
LANGUAGES	English (fluent) · Mandarin (native)