

# Tzu-Lo (Roy) Fann

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Designer, engineer, and maker spanning industrial form, CMF, and product development across consumer electronics, luxury packaging, and automotive. Hands-on from physical prototyping and model-making through production graphics. Integrates AI-assisted design tools into visualization and workflow. Work endorsed for Red Dot and iF Design Award. Fluent in English and Mandarin.

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## PROJECTS & INNOVATIONS

### **Patent Holder — RFID Anti-Theft Bicycle Locking System** · Taiwan Intellectual Property Office #M486589 2014

- Fully concealed anti-theft system. A UHF RFID chip auto-authenticates as the owner approaches, deploying an electromagnetic pin inside the head tube to lock the stem. Fails secure on power loss, supports solar and external charging, and has no physical key interface to pick, clone, or bypass.

### **Tact — Physical Communication Device** · Carnegie Mellon University, School of Design Aug – Dec 2025

- A photo-card printer and companion app bridging long-distance friendships through personal, tangible exchange. Full physical product development: industrial form, CMF definition, FDM prototyping, surface finishing, and looks-like model construction through to companion app UI/UX. **Top reception among 7 projects** at CMU School of Design; instructor-recommended for **Red Dot & iF Design Award**, submission planned Summer 2026.

### **Re:Frame — Modular Eyewear System** · Carnegie Mellon University, Design that Lasts (49-738) Aug – Dec 2025

- A magnetic modular eyewear system enabling user-driven customization of frames, temples, and nose bridges without tools. Explored CMF and form directions through **Midjourney and Vizcom** concept rendering, driving cross-team alignment before committing to physical prototyping.

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## EXPERIENCE

### **Client Engagement Lead** · ATI Inc. — CMU Integrated Innovation Capstone Jan – May 2025 *Pittsburgh, PA*

- Served as **primary liaison** between ATI executive stakeholders, a 6-person graduate team, and CMU instructors. Translated technical requirements into actionable plans, identified and resolved risks early, and communicated progress at every phase gate.
- Originated **HydroPort** — a service-based green hydrogen production system accelerating clean energy adoption through an industry-partner rental model. Identified a **\$903M serviceable market**; developed a path to 25% partner margin by Year 3.
- Delivered a consulting-grade package: **51-page strategic report**, investor-ready pitch deck, and a **scaled vision model demonstrating real-world use cases** — presented in person to ATI executive leadership.

### **Business Development Manager** · Golden Arrow Technology America Sep 2022 – Apr 2024 *Saratoga, CA*

- Led **10-person cross-functional team** spanning design, R&D, production, and QA; oversaw daily output, yield, and fulfillment across **3 factories, 5M+ units/month**.
- Owned **\$57M client portfolio** across Fortune 500 accounts in consumer electronics, cosmetics, and luxury goods — managing CMF direction, material specification, and production quality from supplier sample review through launch.
- Coordinated design, engineering, and manufacturing deliverables across **17 concurrent programs** in consumer electronics and luxury goods, managing DFM feedback and milestones to ensure an on-time production schedule.
- Devised annual U.S. sales strategy; Reported P&L, forecast, and program updates monthly to CEO and board.

### **Brand & Visual Designer** · Evasive Motorsports May 2019 – Apr 2022 *Cerritos, CA*

- Authored the visual identity for the **S2000R sports car** (featured on [BBC Top Gear](#)): reinterpreting Honda's Championship White racing lineage through contemporary “Type R” cues across logotype, CMF, and badging.
- Designed **racing suit graphics** for professional racing driver [Dai Yoshihara](#) for Evasive Motorsports' **Pikes Peak International Hill Climb** campaign — team claimed fastest EV honors at the 100th running.
- Contributed livery, apparel, and brand collateral across **SEMA builds** for a brand with **113K Instagram followers**.

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## EDUCATION

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**Master of Integrated Innovation for Products & Services** · Carnegie Mellon University *Aug 2024 – May 2026*  
*Pittsburgh, PA · GPA 3.95 / 4.00*

**B.S. Computer Science & Physics** · University of Southern California *Aug 2017 – Jun 2021*  
*Los Angeles, CA*

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## SKILLS

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**Industrial Design** Clay Modeling · CNC · Manual Machining · 3D Modeling & Printing · Laser Cutting · Surface Finishing

**Design Domains** 2D CAD · Graphic Design · Packaging Design · Concept Ideation · Prototyping · Livery · Apparel

**Design Software** Fusion 360 · Keyshot · SolidWorks · Figma · Procreate · Vizcom · Midjourney · Illustrator · Photoshop

**Engineering** Java SE Certified (12 yrs) · C++ (10 yrs) · Python · Arduino · Web Development · ML/AI Integration · IoT

**Operations** Cross-Functional Leadership · Supply Chain Management · Process Optimization · Cost Control · P&L

**Language** English (native) · Mandarin (fluent)