

SHIYU CHEN

陈诗雨 · Shae Chen

Technical Product Manager | AI Product · Smart Hardware · User Research

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SUMMARY

Background in industrial design and interaction design, with practice in AI products, smart hardware, and user research. Independently designed and built a smart-cockpit experiment platform on CARLA, Python, and a direct-drive force-feedback wheel — covering hardware–software coordination, real-time communication, mode switching, and user testing. Also took part in a GAC Toyota production-vehicle cockpit retrofit, owning user research, system integration, and an AI voice-interaction prototype. Strong at turning user needs into testable product proposals and pushing them from concept and prototype through real-environment validation.

EDUCATION

National University of Singapore (NUS) · Singapore

Aug 2026 – Jul 2027

M.Sc., Engineering Design and Innovation

Coursework: Engineering System Design; Wearable Interactive Products; Intelligent Sensing Systems; Design Thinking and Product Development; Marketing Creativity; Enterprise Development

South China University of Technology (SCUT) · Guangzhou, China

Sep 2022 – Jun 2026

B.Eng., Industrial Design (Information and Interaction Design) · GPA 3.86 / 4.00

Coursework: UX Design; Software System Design; Smart Hardware; Programming; Mobile App Design; VR; Design Psychology; Human–Computer Interaction Statistics

University of Turku · Turku, Finland

Summer 2025

Summer programme in Game Design

SELECTED PROJECTS

Aware HMI — AI-adaptive cockpit interface *Product definition · Interaction · Prototype*

Aug 2026 – Sep 2026

- **3rd place nationally**, SAE-China Innovation Competition · Intelligent Cockpit OPC Creative Design.
- Defined an HMI that changes information density with driving cognitive load (speed, road type, traffic density, incidents), targeting peak-hour commute overload.
- Designed the loop: scene sensing → load estimation → on-device personalisation from driver interventions → live UI response; shipped a high-fidelity HTML prototype on a CARLA cockpit rig.
- Ran A/B tests (fixed vs adaptive UI) with NASA-TLX, SUS, and interviews: **21% lower cognitive load** in high-load scenes; **SUS 81.7**.

AI Agent Hackathon — immersive classical-text reading app *Solo · Product + demo*

Aug 2026 – Sep 2026

- Advanced from the **Singapore heat to the national finals** (Global Youth AI Agent Hackathon).
- Shipped an AI reading app that pairs classical “life advice” with modern science, using short-video-style card swipes, AI follow-ups, a glossary, collection mechanics, and UGC.
- Built the full concept-to-demo flow independently; designed and deployed a public MCP service over Streamable HTTP for agent-tool evaluation.

Smart-cockpit interaction platform — B.Eng. capstone *Hardware–software · Research infra*

Jan 2026 – May 2026

- Now used as ongoing experiment infrastructure at a university smart-mobility studio.
- Closed the loop between CARLA, Python, and a direct-drive force-feedback wheel; dual researcher/participant UIs; smooth manual ↔ autonomous switching.
- Instrumented tests (n = 14,960): command latency **0.041 ms** (vs ≤50 ms gate); AUTO→MANUAL switch mean **203 ms** (100% success); monitor stream **19.8 Hz**. Usability 3.6/5 (n = 5); wheel auto-follow 4.2/5.

GAC Toyota “Changemakers” — production-vehicle retrofit

Interaction lead · 5 people

Sep 2025 – Dec 2025

- Led user research for outdoor sport and recovery; journey maps and experience decisions. Programme received **RMB 480,000** in corporate funding.
- Integrated Unity HMI, ESP32, lighting and audio on a bZ3X; designed a serial protocol; moved from a centralised lighting scheme to independent front/rear control after on-vehicle tests exposed stability risk.
- Built an in-car Android voice system (Alibaba Cloud speech) and linked a BCI wristband (heart rate / EEG) for fatigue-aware prompts and drive/meditation modes. Shown at a Dec 2025 auto show; covered by People’s Daily, China Youth Daily and others.

Spark — children’s smart toothbrush (industry collaboration with Shummi)

Project lead · Interaction

Sep 2024 – Dec 2024

- Field interviews and observation with 10 families: children resist being told to brush, but will brush with a parent. Designed a social “keep the spark” loop for parent–child and peer brushing.
- **First prize**; concept taken into the company’s mass-production review.

EXPERIENCE

Tsintergy Technology · Guangzhou

B2B Product Manager · Power-market SaaS

Feb 2026 – Jun 2026

- Owned product design for four modules: model management, data management, buyer/seller roles, and inter-regional power mutual-aid trading. Wrote PRDs that turned day-ahead / intra-day bidding and clearing rules into table, line, and bar prototypes.
- Adapted a live Northeast-China product template to North and Central China grid policy; delivered 10+ calculation-logic and requirements documents.
- Post-launch QA: checked 40+ data files (200+ records), found and drove fixes for 10+ clearing-logic errors. Wrote 4 technical annexes for primary and supporting bid packages.

Peropero · Guangzhou

Product Platform · Design Assistant

Jul 2024 – Aug 2024

- Competitive and system-architecture analysis for a new game; testing and feedback triage; helped close 60%+ of core bugs.

Guangdong Urban & Rural Planning and Design Institute

Interaction Designer

Dec 2023 – Feb 2024

- Mapped information architecture and task flows for a Greater Bay Area rental platform across government, enterprise, and tenant roles; shipped with front-end engineers.

PUBLICATION

Chen, S., & Liu, Z. (2026). Experience design research toward immersive and sustainable outdoor exploration: A case of crystal digging. *HCI International 2026* (Springer).

SKILLS

AI / product	LLMs, AI agents, prompt design, RAG, MCP, Codex, Claude Code
Research & PM	User interviews, JTBD, PRDs, journey maps, A/B and usability tests (NASA-TLX, SUS), SQL
Build	Python, ESP32, Arduino, Unity/C#, CARLA, serial protocols, WebSocket, Flask, HTML prototypes
Design	Figma, Axure, Photoshop
Languages	Mandarin (native); English (IELTS 7.0, professional working proficiency)