Xinyi Cheng

Product Design and Tangible Interaction

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Portfolio: xinyicheng.me | LinkedIn

EDUCATION

National Chengchi University **2018/9–2022/6**

B.S. in Digital Content and Technologies

B.A. in Diplomacy

Business & Management Program for Students with Specialty of Foreign Languages

PROFESSIONAL EXPERIENCE

Garmin **2023/9–Present**

Engineering Project Manager, Marine Electrical Engineering

- Built AI-assisted test-data analytics and automated alerts to help engineers identify emerging quality trends earlier; automated data retrieval and comparison, reducing time spent on these tasks by approximately 99%.
- Integrated department-specific websites and systems into a unified tool, enabling our department to complete tasks without switching between platforms; automated ownership, milestone tracking, and delay alerts.
- Coordinated pilot-to-mass-production and ongoing electronics issues across engineering, manufacturing, sourcing, PCB, planning, and U.S. design teams; managed component shortages, shared BOM parts, and approved alternatives.
- Designed CAD models and 3D-printed fixtures for engineering validation and production-line use.
- Received Garmin's Best Newcomer Award in the first year of employment.

Billion Watts Technologies **2023/3–2023/9**

Project Manager

- Coordinated battery energy storage projects across site preparation, government permitting, contractors, construction, and overseas owners and equipment suppliers.
- Researched evolving lithium-battery fire-safety regulations with fire-protection engineers; identified siting constraints and recommended preventive measures and schedule adjustments.

MEandMine **2020/8–2021/7**

Part-time Industrial Designer · During undergraduate studies

- AHA! Tantrum: Led physical play design from prototyping and family testing through production; coordinated specifications, sourcing, costs, and timelines with U.S. and Taiwan teams. The product earned Amazon's Choice recognition.
- AHA! Brain: Developed concepts and functional prototypes for the Memory Camera and 3D Maze, refining interactions and assembly before handoff for final form and manufacturing development. The product earned Amazon's Choice recognition.

HAYASHI Office **2019/7–2020/1**

User Experience Design Intern · During undergraduate studies

- Conducted user research for Xinfu Market service design with the JUT Foundation for Arts and Architecture; developed exhibition visuals for KIGURUMI.BIZ and facilitated Cha Tzu Tang placemaking workshops.

SELECTED DESIGN PROJECTS

EchoScout **2024–2026**

Physical–digital play experience that makes sonar tangible

- Independently designed and built a playable physical–digital experience that introduces sonar concepts through a LiDAR-based simulation: players construct an underwater world and navigate it using real-time visual clues.
- Integrated industrial design, electronics, AI-assisted programming, and visual design into a complete learning journey—from a sonar animation and shared exploration to collectible discoveries and a personalized expedition record.

AHA! Tantrum / iCalm Galaxy **MEandMine**

Commercial educational play system

- Led the physical play experience from gameplay and family testing through production; designed the Balancing UFO and Calming Orb to turn emotional regulation into a tangible cycle of imbalance, pause, and recovery.
- Redesigned the UFO for children's fine-motor abilities and controlled wobble; used stock materials to reduce tooling costs and worked with sourcing and vendors on manufacturability, graphics, and assembly instructions.

Product recognition: Amazon's Choice; CBS 17; Drew Barrymore's 2021 Holiday Top Gift; eslite.

AHA! Brain **MEandMine**

Commercial educational play product · Concept and interaction development

- Designed the Memory Camera and 3D Maze within a four-activity neuroscience kit, translating emotional perspectives into interchangeable color lenses and planning into a build–test–adjust challenge maze.
- Reduced six lens colors to two for clearer visual effects; simplified maze assembly using shared materials while preserving route planning. Developed concepts and functional prototypes before handing them to the team for final form and manufacturing development.

Product recognition: Amazon's Choice; Amazon Small Business Gift Guide; Kiddos Magazine (2022); eslite.

LEADERSHIP AND COMMUNITY

National Taiwan University **During undergraduate studies**

Design Thinking Club — Vice President and Workshop Facilitator

- Organized member activities and design-thinking courses; facilitated workshops for companies, organizations, and students.

National Chengchi University **During undergraduate studies**

International Youth Organization

- Organized events and activities for international students in Taiwan.

Golf Club · Diving Club

Garmin

Badminton Club — Vice President

Coffee Club · Golf Club · Yoga Club

SKILLS AND LANGUAGES

Design: Product design, tangible interaction, user research, physical prototyping, instruction design, workshop facilitation.

Tools: Rhino, Fusion 360, KeyShot, Adobe Photoshop, Illustrator, Figma, 3D printing, AI-assisted programming.

Systems: Test analytics, workflow automation, BOM and alternate-part management, production documentation.

Languages: Mandarin (native); English (IELTS 8.0).