Bob Tianqi Wei

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Industrial Product designer with hands-on expertise in smart devices, prototyping, and design for manufacturing. Experienced in combining hardware, software, and interaction design to build adaptive systems for everyday use. Committed to delivering functionally elegant solutions that respond to human needs.

Education

University of California at Berkeley, College of Engineering, CA, USA — Aug 2023 – Dec 2024
Master of Design in Human-Computer Interaction — Distinguished Scholar, 3.66/4

Tsinghua University, Academy of Arts and Design, Beijing, China — Aug 2019 – Jun 2023
B.A. in Industrial and Product Design — 3.71/4

Selected Projects

MorphingSkin – Fluidic Multimodal Interface, Morphing Matter Lab | Product & Mechanical Designer — 2024-2025

- Designed a stretchable surface integrating electroosmotic pumps for shape, light, and force feedback.
- Built soft robotic prototypes for wearables and tangible interfaces with multimodal actuation.
- Enabled programmable morphing through custom fabrication and system design.

Illuminatio – Adaptive Smart Lighting with Biocentric AI, Industrial Designer & Developer — 2023

- Created a biologically-informed smart lamp that adjusts light based on user rhythm and behavior.
- Prototyped with Raspberry Pi, camera sensing, and servo-controlled light modulation. Created Rhino and AutoCAD schematics, fabricated custom aluminum mounts, and implemented dynamic scene transitions.
- Explored user-in-the-loop adaptive systems for well-being and smart environments.

Ekphrasis – AI Feedback Tool for Graphic Design Education, BiD Lab | UX Researcher & Developer — 2024

- Designed an AI-powered interactive tool offering visual feedback to help students understand abstract design concepts.
- Conducted user research and thematic analysis with 11 educators to identify language barriers in design critique.
- Developed an Interface and a machine learning model to generate contextualized visual examples based on students' work, enhancing design comprehension and vocabulary acquisition.
- Improved learning outcomes for novice designers through real-time, visual, and context-aware design aids.

Sympathetic Orchestra – Interactive System for Conducting Practice, Interaction Designer & Developer — 2022-2024

- Developed a real-time hand-tracking conducting interface that mirrors live orchestra responsiveness.
- Led qualitative user study showing improved phrasing and expression through dynamic audio feedback.
- Applied HCI and embodied learning frameworks to support tacit musical skill development.

Teaching

UC Berkeley, INFO 213: Introduction to User Experience Design, Reader — Aug 2024 - Dec 2024
UC Berkeley, DESINV 22: Prototyping and Fabrication, Lead TA — Jun 2024 - Aug 2024
UC Berkeley, INFO C262: Theory and Practice of Tangible User Interfaces, Lead TA — Aug 2023 - Dec 2023

Key Publications

Generating Visual Aids to Help Students Understand Graphic Design with EKPHRASIS — Apr 2025
Bob Tianqi Wei, Shayne Shen, Shm Almeda, Bjoern Hartmann.
ACM Conference on Human Factors in Computing Systems (CHI) 2025, doi.org/10.1145/3706599.3719807

Demonstration of Sympathetic Orchestra: An Interactive Conducting Education System for Responsive, Tacit Skill Development — Oct 2024
Bob Tianqi Wei, Shm Almeda, Ethan Tam, and Dor Abrahamson.
ACM Symposium on User Interface Software and Technology (UIST) 2024, doi/10.1145/3672539.3686783

Skills

Design & Research: User Research, Design Thinking, Wireframing, Storyboarding, Journey Mapping, Design for Manufacturing
Tools: Figma, Rhino, Grasshopper, SolidWorks, AutoCAD, Keyshot, Adobe CC, Unity, Arduino, Processing, Raspberry Pi
Prototyping & Fabrication: 3D Printing, Laser Cutting, Silicone Casting, Physical Computing, Sensor Integration
Programming: C++, Java, Python, MATLAB, Processing, JavaScript, HTML/CSS, Max MSP
Languages: English (TOEFL 110), Mandarin Chinese (Native), Japanese (Fluent)
Hobbies: Photography, Musical, Watercolor, Badminton, Cooking, Palmistry, FengShui