

Bob Tianqi Wei

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Education

University of California at Berkeley, College of Engineering

Master of Design, Human-Computer Interaction

Aug 2023 – Dec 2024

Distinguished Scholar, 3.66/4

Tsinghua University, Academy of Arts and Design

Aug 2019 – Jun 2023

B.A. in Industrial Design

3.71/4

Skills

Programming: Python, TypeScript/JavaScript, C++ , Java, HTML/CSS, MATLAB, Processing, Max/MSP

ML & Vision: PyTorch, scikit-learn, CLIP, SentenceTransformers, ResNet50, OpenCV, UMAP, LLM APIs, prompt design

Data & Systems: Vector search, Flask, Express, Node.js, React 18, Docker, Git

HCI Research: study design, IRB/ethics, interviews, thematic analysis, usability testing, accessibility

Tangible Interfaces: embedded systems, sensors & actuators, soft robotics

Fabrication: mechanical design, CAD: Rhino, SolidWorks, Fusion 360, digital fabrication, flow/pressure & tensile testing

Design: interaction design, rapid prototyping, Figma, Adobe CC

Publications

MorphingSkin: A Skin-like Platform that Integrates Multimodal Hydraulic Actuators Bbased on Flexible Electroosmotic Pumps. Tianyu Yu, Peisheng He, **Bob Tianqi Wei**, Chenyuheng Wang, Xueqing Li, Xuezhu Wang, Yao Lu, Wei Yue, Megan Teng, Zihan Wang, Liwei Lin, Haipeng Mi, Qi Lu, Lining Yao.

ACM Symposium on User Interface Software and Technology (UIST) 2025 , 🏆 BEST PAPER AWARD. 10.1145/3746059.3747685

Generating Visual Aids to Help Students Understand Graphic Design with EKPHRASIS. **Bob Tianqi Wei**, Shayne Shen, Shm Almeda, Bjoern Hartmann.

ACM Conference on Human Factors in Computing Systems (CHI) 2025. 10.1145/3706599.3719807

Labor, Power, and Belonging: The Work of Voice in the Age of AI Reproduction. Shm Almeda, Robin Netzorg, Isabel Li, Ethan Tam, Skyla Ma, **Bob Tianqi Wei**.

ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2025. 10.1145/3715275.3732082

Demonstration of Sympathetic Orchestra: An Interactive Conducting Education System for Responsive, Tacit Skill Development. **Bob Tianqi Wei**, Shm Almeda, Ethan Tam, Dor Abrahamson.

ACM Symposium on User Interface Software and Technology (UIST) 2024. 10.1145/3672539.3686783

Material-Driven Design and Fabrication of Devices for Direct Ecological Interventions: Practices, Challenges, and Opportunities. Yaning Li, Ziqian Yu, Chengjun Li, Yuexi Chen, Yue Yang, Tingyu Cheng, Ziyao He, **Bob Tianqi Wei**, Eldy S. Lazaro Vasquez, Zeyu Yan, Di Wu, Tianyu Yu, Yuecheng Peng, Dinesh K. Patel, Huaishu Peng, Nivedita Arora, Aditi Maheshwari, Guanyun Wang, Teng Han, Josiah Hester, Jean-Baptiste Labrune, Andreea Danielescu, Pedro Lopes, Vikram Iyer, Hiroshi Ishii, Lining Yao, Qiuyu Lu, Meng Li.

ACM Conference on Human Factors in Computing Systems (CHI) 2026, Paper Under Review

Experience

UC Berkeley EECS - Berkeley Institute of Design Lab. Prof. Bjoern Hartmann, Researcher

Nov 2023 – Present

- HCI research at the intersection of generative AI and creative work; mixed-methods integrated with system building
- Developed [ArtiFactor](#), a multi-agent creative platform with LLMs and multimodal ML; full-stack orchestration (React/Node/Flask, Dockerized ML)
- Co-authored *EKPHRASIS* (CHI '25) and *Labor, Power, and Belonging* (FAccT '25)

eTopus Technology Inc., Software Engineer – Frontend, San Jose, CA

Oct 2025 – Present

- Built OpSyn, an internal multi-agent enterprise AI assistant using a DeepSeek-distilled LLM, Claude, and a Flask backend
- Implemented React/Vite chat UI with streaming responses, file uploads, and Azure-authenticated user sessions
- Integrated vector search and retrieval-augmented generation over SharePoint and Jira data for operational workflows
- Designed explanation UIs that visualize agent tool-calls and support user trust in enterprise AI decisions

Anything (Create, Inc.), Software Engineer (Contract), San Francisco, CA

Jul 2025 – Sep 2025

- Shipped high-fidelity marketing sites for the [Anything](#) AI app builder; collaborated with design and founding team
- Converted Figma specs into pixel-accurate, responsive React UI; established reusable components and design tokens
- Contributed to internal AI-agent workflows and QA; improved UI quality and handoff with engineering

UC Berkeley ME - Morphing Matter Lab. Prof. Lining Yao, Researcher

Feb 2025 – May 2025

- Co-designed a portable driver; contributed to schematic and PCB layout, isolation design, connector interfaces, and board

- bring-up for multimodal hydraulic actuation
 - Led structural stack-up and enclosure design; established repeatable fabrication workflows and assembly fixtures
 - Authored the *Design Space* and *Applications* sections; proposed and prototyped multiple application scenarios
 - Produced demo assets—storyboarded, filmed, and edited videos; prepared figures and documentation
 - Co-authored *MorphingSkin* (UIST '25 **Best Paper**)
- UC Berkeley School of Education. Prof. Dor Abrahamson**, Graduate Student Researcher Aug 2023 – Dec 2023
- Investigated embodied learning and tacit skill acquisition in interactive educational environments
 - Developed *Sympathetic Orchestra* (UIST '24), a webcam-gesture + Web Audio system for responsive virtual-orchestra practice
- Tsinghua University, Dept. of Industrial Design. Prof. Lintao Tang**, Student Researcher Nov 2022 – Jul 2023
- Built *ILLUMINATIO*, an adaptive, AI-driven ambient lighting system responsive to user behavior (Raspberry Pi, Python/C++)
 - Synthesized illumination design principles from 18 technical publications to guide control parameters and evaluation
- Association for Computing Machinery (ACM)**, Reviewer Sep 2024 – Present
- Reviewed submissions for the ACM CHI conference, focusing on CSTs and education

Technical Projects

- Anything Font Classifier v4 – Font recognition model for UI screenshots** (PyTorch, LoRA) Jul - Sep 2025
- Fine-tuned a DINOv2-based image classifier on a curated 394 Google Font Families dataset using LoRA for efficient adaptation
 - Embedded pad-to-square, resize, and ImageNet normalization into the model's forward pass to allow raw UI screenshots input
 - Integrated it into a production screenshot-to-UI pipeline, achieving ~86% top-1 accuracy on a held-out test set
- PartSelect Chat Agent – AI assistant for appliance parts support** (React, Node.js, Pinecone) Jun 2025
- Implemented a full-stack LLM-based support agent for refrigerator and dishwasher parts using DeepSeek, React, and Node.js
 - Integrated Pinecone vector search and query normalization to map user requests and model numbers to documentation
 - Delivered a fully functional prototype with <3s response latency, <1% error rate, and full mobile optimization within 48 hrs

Teaching

- BPC Art Studio, AI Art and Creative Coding Courses**, Instructor, Palo Alto, CA Fall 2025
- UC Berkeley, INFO 213: Introduction to User Experience Design**, TA Fall 2024
- Grades and provides feedback on assignments and coaches students practice in-depth interviews and UX research.
- UC Berkeley, DESINV 22: Prototyping and Fabrication**, Lead TA Summer 2024
- Teaches manufacturing techniques and basic electronics to help students build a Bluetooth-controlled vehicle.
- UC Berkeley, INFO C262: Theory and Practice of Tangible User Interfaces**, Lead TA Fall 2023
- Delivered introductory courses on open-source hardware development and programming.
 - Developed a course website enabling students to submit assignments, access course materials, schedule office hours.
- Tsinghua University, Romantic and 20th Century Piano Pieces Performance**, Lead TA Fall 2021, Spring 2022
- Xiaozhe Art Studio and Wufang Design Studio, Graphic Design Courses**, Instructor (Part Time) Aug 2019 - Feb 2021

Presentations and Speeches

- ACM UIST '25**, Busan, South Korea. *MorphingSkin*, Best Paper, demo & paper Oct 2025
- ACM FAccT '25**, Athens, Greece. *Labor, Power, and Belonging*, paper Jun 2025
- ACM CHI '25**, Yokohama, Japan. *Generating Visual Aids with EKPHRASIS*, paper & poster Apr 2025
- UC Berkeley MDes Graduation Ceremony. The Transformative Power of Interdisciplinary Design**, invited speech Dec 2024
- UC Berkeley MDes Graduate Exhibition. EKPHRASIS: Learning Tacit Knowledge in Visual Design**, demo Dec 2024
- Jacobs Winter Showcase (HCI), UC Berkeley. Romantic Breakups as a Lens for Industrial Cybersecurity**, poster Dec 2024
- ACM UIST '24**, Pittsburgh, PA, USA. *Sympathetic Orchestra*, demo Oct 2024
- UC Berkeley Education Research Day. Building Professional Hearing**, paper Apr 2024
- Jacobs Design Showcase, UC Berkeley. Poetry in Motion**, installation; *Plano*, installation Dec 2023
- ISAM '23**, Carnegie Mellon University, Pittsburgh, PA. *ILLUMINATIO*, poster Oct 2023
- Undergraduate Exhibition, Academy of Arts and Design, Tsinghua University. Intelligent Illuminating Product Design Based on Machine Learning**, demo & paper Jun 2023
- Student Academic Exhibition, Tsinghua University. Sympathetic Orchestra**, demo & poster Apr 2023

Awards

- Best Paper Award**, ACM Symposium on User Interface Software and Technology (UIST) 2025 Oct 2025
- MDes Distinguished Scholar Award**, University of California, Berkeley Mar 2023
- Social Work Excellence Scholarship**, Tsinghua University 2020, 2023
- Scholarship for Excellence in Literature and Art**, Tsinghua University 2020, 2021, 2022
- Honorable Mention**, 3rd China College Student Power Battery Innovation Competition Nov 2021

First Prize of Youth Group, The 7th Macau-Asia Pacific Youth Piano Competition	Jul 2021
Second Prize of Tsinghua University, Beijing College Students Engineering Ability Competition	Dec 2019

Music Performance

Bob Tianqi Wei: Stringed Harmony, Live at CNMAT, UC Berkeley	May 2024
Tianqi Wei & Friends’ Graduation Concert, Live at Tsinghua University Music Library	May 2023
Rachmaninoff: Piano Concerto No.2, Conductor, Live at New Tsinghua School Concert Hall	May 2022
Elisabeth (musical, Japanese), Rudolf, Live at Meng Minwei Hall, Tsinghua University	Oct 2021
J.S.Bach: Concerto in D Minor BWV 974, Piano Solo, Live at Steinway Hall Beijing	Jul 2021
J.S.Bach: Goldberg Variations BWV 988, Piano Solo, Live at Meng Minwei Concert Hall	Dec 2020

Leadership

Tsinghua University Student Art Troupe Clavier Team, President	Aug 2021 - Aug 2022
<ul style="list-style-type: none"> Organized and held large-scale concert activities and art popularization lectures. Empowered the team to participate in international professional competitions. 	
Tsinghua University iOS Club, Leader of Publicity Group and Member of Product Manager Team	Aug 2021 - Aug 2022
<ul style="list-style-type: none"> Represented the club to Apple headquarters for an interaction and hardware theme exchange, allowing the club to receive support for development equipment, funding, and internship resources. Led team developed a cognitive training app for the elderly to help them practice mental exercises to prevent dementia. 	
Tsinghua University Student Union, Member of Sport and Recreation Department	Aug 2019 - Aug 2020
<ul style="list-style-type: none"> Organized basketball games and planned a promotional campaign for graduation music festivals. 	