

# Yixuan Li

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Research Interests: HCI, Fabrication, Tangible, AI-Assisted Embodied Learning Systems

## Education

### Tsinghua University

2025 ~ Present

- Shenzhen International Graduate School, M.S. in Electronic Information
- Core Class: Artificial Intelligence and Innovative Development, Innovative Methods for Non-contact Physiological Sensing, Product Design and Development, X-Robot Development

### Beijing Forestry University (211)

2021 ~ 2025

- School of Art and Design, B.A. in Product Design, AverageScore: 92.7 (GPA: 3.88/4.0), Ranking: 1/34 (1/180).
- School of Information Science and Technology | Computer Art (Minor)

### Honor and scholarship:

- 2023-2024 Baosteel Outstanding Student Scholarship (~500 national awardees per year)
- 2022-2023, 2023-2024 China National Scholarship (1%), 2025 Beijing Outstanding Graduates (5%)
- 2023-2024, 2022-2023, 2021-2022 BJFU Outstanding Student First Class Scholarship (2%)
- 2023-2024, 2022-2023, 2021-2022 BJFU Scholarship for Academic Excellence
- 2021-2022 BJFU Special Scholarship for New Students (2%), 2021-2022 BJFU Scholarship for Cultural and Sports Excellence,

## Publication

[1] HanoCH: a Modular and Multimodal Cultural Heritage System for BLV users

ACM CHI'26 (CCF-A) REBUTTAL STAGE Yixuan Li, Pingting Chen, Ziqi Gong, Jiayong Huang, Xin Tong.

[2] GenRole: Personalizing Role Play for Educators Supporting Autistic Students' Social Interaction Learning

ACM CHI'26 (CCF-A) REBUTTAL STAGE Yixuan Li, Keyi Zeng, Jiaqi Zong, Yinying Zhu, Xin Tong.

[3] EchoClass: An LLM-Driven System for Differentiated Lesson Planning in Special Education

Jing Yang Lin, Yixuan Li, keyi Zeng, Hongni Ye, Hongzhu Deng, Xin Tong. In submission

[4] Understanding Interdisciplinary Collaboration in Haptic-Fabric Wearable Design: Insights from a Kit-Based Prototyping Study

Yixuan Li\*, Shuai Wang\*, Xiuqi(Tommy)Zhu, Xiaozhan Liang, Rui Zhang, Xiwen Yao, Jiao Yang. In submission

[5] SofiBuddy: Soft mobile Interface for On-Body Interaction

Yixuan Li, Jie Yu, Chenwan Zhong, Zhaowen Deng, Teng Han, Yi Cai, Xin Tong.

Poster Award, ACM SIGGRAPH Asia' 24 (CCF-A) Poster Computer Graphics and Interactive Techniques-Asia

[6] SemanticTap: A Haptic Toolkit for Vibration Semantic Design of Smartphone

Rui Zhang\*, Yixuan Li\*, Jiao Yang.

ACM ICMI' 24 (CCF-C) ACM International Conference on Multimodal Interaction

[7] EmoPus: Providing Emotional and Tactile Comfort with a AI Desk Companion Octopus

Yixuan Li\*, Zhaowen Deng\*, Yanyin Zhu, Xin Tong.

ACM USIT' 24 (CCF-A) SIC Adjunct Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology.

[8] HapticMetric: A Smartphone Haptic Experience Computing Systemg [J].

Rui Zhang\*, Yixuan Li\*, Jiao Yang.

ACM ChineseCHI' 24 International Chinese Association of Computer Human Interaction

[9] Community Ecosystem Balance: Research on Design Strategies and Implementation Paths of Green Community Services[J].

YuFei Wang, Yixuan Li, Peng Han.

(Chinese Social Sciences Citation Index, CSSCI) Urban Development Research, 2025(02).

## Research Experience

### Tsinghua University Future Lab | Research Assistant

2022-11 ~ 2024-05

18 months

Advisor: Yang Jiao.

- Led projects including SemanticTap [6], Haptic Metric [8], and Haptic-Fabric Wearable Design [5].
- Conducted research on vibrotactile feedback evaluation and haptic perception. Designed and fabricated haptic actuators and wearable systems

### The Hong Kong University of Science and Technology (Guangzhou) | Full-time Research Assistant

2024-07 ~ 2025-09

15 months

Advisor: Prof. Xin Tong

- Led projects including HanoCH [1], GenRole [2], EmoPus [7], and SofiBuddy [3]. Participate in the project EchoClass[4]
- Directed research on tangible interaction, digital fabrication, and AI-assisted accessibility design.
- Gained extensive experience with PLA/FDM 3D printing and diverse fabrication processes.

### The University of Texas at Dallas, School of Computer Science | Project leader

2025-06 ~ Present

Advisor: Liang He, Xin Tong

- Led the Tactio project, Developed swarm robot prototypes for delivering haptic feedback in VR environments.
- Fabricated electroosmotic pumps, printed electronics, and Toio-based 3-DOF tilting platforms

### Southern University of Science and Technology, School of Design | Visiting Student

2023-05 ~ 2023-12

Advisor: Prof. Mirna ZORDAN

- Participated in a project on behavioral performance of environments under complex conditions, conducting literature reviews and developing Unity projects related to human peripheral vision.

## North Carolina State University, School of Wilson College of Textiles | Project leader

2024-01 ~ 2024-03

Advisor: Prof. Rong Yin.

- Responsible for project on Emalink: Textile Devices Based on SCR Signals. Applied the SMA based on SCR signal to origami structured textiles wearable device.
- Research poster presentation Awarded 2024 Winter GEARS Program-Certificate of Excellence.

## University of Rochester, School of Computer Science | Research Intern

2024-01 ~ 2024-05

Advisor: Prof. Yukang Yan.

- Responsible for project on A Visualization Study to Facilitate Social Connections in VR Asynchronous Games.
- Capturing users' behavioral, developing visual physiological data interfaces as socio-emotional cues in asynchronous VR game.

## Exhibition & Industry Collaborations Please see portfolio for details

### [Main Contributor] "Mycelium Spectrum"-Seeing-Diversity Digital Media Art Exhibition, Guangzhou Library, 2025

- We developed an interactive system, metaphor of mycelium to support children with developmental disorders.
- Mixed media: nickel-copper fabric, acrylic, lightweight clay, electronic components

### [Lead] Plastic Response x Artworks Composition Patch Series, 798 Art Space Exhibition, 2024

- Collaborate with the eco-friendly brand Plastic Answer, developed recycled plastic sheets
- Exhibited in the Infinity x City-Children's Art Festival at the Shanzhongtian Art Center-Genkan.

### [Lead] IKEA x LIVAT Sustainable Healing Space Installation, Beijing Aloha Commercial Space, 2024

- Collaboration with IKEA and INGKA Group, we designed a space installation in Beijing's largest commercial space for parents and children.
- The work was introduced to Jesper Brodin, CEO of INGKA Group, and was supported by the leading groups in Sweden and China.

### [Lead] Xiaomi 14&14pro Vibration Waveform Optimization Design, Xiaomi Flagship Phone, 2023

- Using accelerometers, Pico5444DMSO oscilloscopes, semi-structured interviews with users, UEQ, using multiple linear regression, KMO, particle swarm optimization algorithms to analyze the data and generate new waveforms (see *SemanticTap* [6], *Haptic Metric* [8]).

## Academic Competition

### Entrepreneurship Competition

- The 8th China International Innovation and Entrepreneurship Competition for College Students, **Provincial Excellence Award**;
- The 1st Youth Green Science and Technology Innovation Competition, **2nd Prize of the National Competition**;
- The First National Student Career Planning Competition, **2nd Prize of Beijing Region Employment Track**;
- "Youth Creating Beijing" "Challenge Cup" Capital University Students Science and Technology Competition, **2nd Prize**;
- Computer Application Competition of Five Provinces in North China, **2nd Prize** ;
- China Hainan Free Trade Port High School Main Track, **Excellence Award**;

### Design Competition

- The Ninth "Creativity - Made in China" Automobile Design Competition, **National 2nd Prize (3%)**;
- The 5th China University Student Research English Speech Contest, **National Grand Prize (14th** in China, the first student from BJFU to win this prize);
- The 7th Beijing Cultural Creativity Competition, **Finalist Award**;
- 2023 Beijing Industrial Design Competition for College Students, **2nd, 3rd Prize and Excellence Award**;
- 2023 NCDA Future Designer Competition, Beijing **3rd Prize**;
- 2023 DiD Award Dongguan Cup International Industrial Design Competition, **Excellence Award**;
- The 11th International Art & Design Competition Mutual Arts Award, **Excellence Award**;
- 2023 Venice International Art and Design Award, **Student Group Nomination Award**;
- 2023 USDA Design Competition, **2nd Prize**;
- 2023 G CROSS Design Competition, **2nd Award**;
- 2023 HK Contemporary Design Competition, **2nd Prize**;

## Internship Experience

### Takway.ai (Shenzhen Lingdong Future Technology Co., Ltd.) | Interaction Design Intern

- Co-designed "Sweekar", an AI pocket pet integrating AI, nurturing gameplay and multi-sensory hardware, covering interaction flows and product structure; scheduled for Kickstarter & CES 2026 and featured by 21st Century Business Herald and major expos (CITE 2025, wteam AI Maker Festival, Shanghai New International Expo Centre).

2025-11 ~ present

### BMW (China) Service Co., Ltd | Electric Vehicle Program & User Research Internship

2023-12 ~ 2024-05

- Conducted testing and market research on the BMW tram charging system as well as in-vehicle hardware and interfaces, and analyzed competitor vehicles such as NIO and XPeng for cross-testing comparisons.

5 months

### North Carolina State University | Campus Ambassador

2024-01 ~ 2024-05

- Participated in 3 international program presentations, as well as in the media campaigns for the Red Book and website. Attending 2024 Summer NC State Developing Cultural Competence etc.

4 months

### Guangzhou Yuanwukong Technology Co. | UI Designer

2022-10 ~ 2023-07

9 months

- Cooperate with developers to complete the tasks of interaction, design and user experience research of the project. Analyze business requirements and generate interface and physical product prototypes through user research.

### Shenzhen EDA Art Space | Curatorial Assistant

2022-06 ~ 2022-09

3 months

- Responsible for planning and arranging the solo exhibition of Central Academy of Fine Arts artist Dazhi, dynamic poster production etc. Accumulated more than 10,000 radiant people.

## Skills & Hobbies

**Engineering & Hardware** Arduino, ADAMS, 3D Printing (FDM, SLA) Laser Cutting, CNC, Silicone Casting.

**Design** Rhino, AutoCAD, Solidworks, Adobe PS, AI, AE, ID, Figma, Procreate. **CS** Python, LLM Implementation, HTML, JavaScript.

In my spare time, I enjoy **alpine skiing** and **squash**.