

YUECHENG PENG

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Education

University of Washington

Master of Science in Technology Innovation

23.9 - 24.12

Zhejiang University

Bachelor of Engineering, Industrial Design. GPA [3.98/4.0(91.93/100)] Rank [1/45]

19.9 - 23.6

- **Relevant Coursework:** Information Product Design, Information & Interaction Design Technology, Ergonomics
- **Awards:** Four times Excellent Academic Model, two times Second Class Scholarship, one time Third Class Scholarship

Research Experience

Mobility Device Modification

University of Washington, Researcher

Advisor: Jennifer Mankoff, Jerry Cao, Make4All Group

24.02 - ongoing

- Developed electronic add-ons to mobility devices to equip them with richer input and output functionalities.
- Fabricated modular cane prototypes, allowing users to customize and reconfigure different parts of the cane.

Knitted Sensors

University of Washington, Researcher

Advisor: Nadya Peek, Hannah Twigg-Smith, Machine Agency

23.10 - ongoing

- Used different machine knitting methods (intarsia, short rows, etc.) to fabricate textile sensors (ongoing).

Fabrication of Functional Textiles

Zhejiang University, Research Leader

Advisor: Guanyun Wang, International Design Institute of Zhejiang University

22.9 - 24.4

- Proposed a low-cost and highly accessible double-coating pipeline to fabricate washable and reusable functional textiles with customized input functionalities.
- Conducted extensive material experiments and evaluations, and fabricated demo applications of the functional textiles using the proposed method.
- Wrote the paper independently (accepted by CHI24 as the first author).

Designing Knowledge Graph Tool for Sustainability Education

Zhejiang University, Research Intern

Advisor: Xuanhui Liu, International Design Institute of Zhejiang University

21.10 - 22.4

- Designed and developed (front-end and back-end) a online knowledge graph tool ready to be used in sustainable education settings.
- Collected and organized related works of this research.
- Paper submitted to the journal of cleaner production.

HoloLens2 Expander Interaction

Zhejiang University, Research Intern

Advisor: Liuqing Chen, International Design Institute of Zhejiang University

21.8 - 21.12

- Led the design team, came up with design guidelines and standardized workflow, which increased the inter-team work efficiency by 60%.
- Optimized user interaction experience with the HoloLens2 interface and improved the comfort level as well as immersiveness.
- Our design team was successfully selected to cooperate with Zhejiang Provincial Energy Group Company Ltd. in the bidding.

Music Emotion Visualization

Zhejiang University, Research Assistant

Advisor: Kejun Zhang, International Design Institute of Zhejiang University

20.6 - 21.6

- Responsible for literature research and functional design.
- Designed and conducted the experiment to collect people's valence-arousal sentiment value on music as well as different graphic and color expressions, which constitute the supporting database of our mobile App.
- This project was selected as a provincial research project (top 6%) and we developed a App demo.

Publications

- **Yuecheng Peng**, Danchang Yan, Haotian Chen, Yue Yang, Ye Tao, Weitao Song, Lingyun Sun, and Guanyun Wang. 2024. IntelliTex: Fabricating Low- cost and Washable Functional Textiles using A Double-coating Process. In Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '24), May 11–16, 2024, Honolulu, HI, USA. ACM, New York, NY, USA, 18 pages. <https://doi.org/10.1145/3613904.3642759>

Academic Services

- Reviewer, The ACM CHI Conference on Human Factors in Computing Systems (CHI), 2024

Skills & Interests

- **Electrical Engineering:** PCB Design (KiCAD), Wireless (WiFi, BLE), Wearable Electronics, ESP32, Arduino, Raspberry Pi
- **Programming:** JavaScript, Python, C, C#, Processing. Capable of both front-end and back-end development.
- **Design & Research:** Rhino, Figma, Adobe CC, Design Thinking, Semi-Structured Interviews, Focus Groups, Surveys, Statistical Analysis (SPSS)
- **Fabrication:** PCB Fabrication, 3D Printing, Laser Cutting, CNC, Machine Knitting, Embroidery, Silicone Casting, Woodshop, Sewing
- **Languages:** Chinese (native), English (Fluent: TOEFL 109, GRE 325)
- **Interest:** Personal Fabrication Research in HCI