Junxian Li

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EDUCATION

Zhejiang University, School of Computer Science and Technology **Hangzhou, CN**

M.S. in Design Science 2022 -2025(expected)

- Relevant coursework: Intelligent Design, Innovation Design, Design Research, Informatics for Design, Integrated Design

B.S in Computer Science and Technology 2017 – 2022

- Relevant coursework: Information System Security, Advanced Data Structure & Algorithm Analysis, Computer Organization, Computer Networks, Operating System, Computer Architecture, Database System, Compiler Principle, Artificial Intelligence, Introduction to Applied Operations Research

RESEARCH INTERESTS

My research focuses on creating immersive and multisensory experiences in Virtual Reality, with an emphasis on **Interaction Design**, **User Experience**, and **Immersive Analytics**. I am particularly interested in developing innovative ways to enhance sensory feedback, such as olfactory and tactile interactions, to bridge the gap between physical and digital environments. I aim to design intuitive interfaces that enable users to engage more naturally with complex data and virtual environments. My work spans experimental system development, user-centered design, and evaluating multisensory interfaces to explore how digital interactivity can be both enriching and intuitive.

PUBLICATIONS AND SUBMISSIONS

Publications

1. **Li, J.**, Wang, Y., Gong, H., Cui, Z. 2023. AwakenFlora: Exploring Proactive Smell Experience in Virtual Reality through Mid-Air Gestures. In Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23 Adjunct). https://doi.org/10.1145/3586182.3616667
2. Lu, Y., **Li, J.**, Cui, Z., Hu, J., Lin, Y., Luo, S. 2024. Designing Spatial Visualization and Interactions of Immersive Sankey Diagram in Virtual Reality. In Proceedings of the 32nd ACM International Conference on Multimedia (MM '24). https://doi.org/10.1145/3664647.3681460
3. Cui, Z., Wang, S., **Li, J.**, Luo S., Ion, A. 2023. MiuraKit: A Modular Hands-On Construction Kit For Pneumatic Shape-Changing And Robotic Interfaces. In Proceedings of the 2023 ACM Designing Interactive Systems Conference (DIS '23). https://doi.org/10.1145/3563657.3596108

Submissions

4. **Li, J.**, Wang, Y., Cui, Z., Brooks, J, Yan, Y., Lou, Z., Li, Y. Mid-Air Gestures for Proactive Olfactory Interactions in Virtual Reality. Submitted to CHI 2025.
5. Zhou, L., Zhang, Y., An, X., **Li, J.** E-scent Coach: A Wearable Olfactory System to Guide Deep Breathing Synchronized with Yoga Postures. Conditionally accepted at TEL2025.
6. Li, Y., Wang, Y., …, **Li, J**., Lou, Z. AromaBite： Enhancing Flavor Perception Through Edible Retronasal Scent Release. Submitted to CHI 2025.

RESEARCH EXPERIENCE

Artificial Intelligence Generated Design Lab, Zhejiang University **Hangzhou, CN**

*Master's student | Supervisor: Professor **Shijian Luo*** Sep. 2022 - present

- Participated in project [2]: Building on 2D Sankey diagrams, we developed 3D Sankey diagrams by incorporating the additional spatial dimension of VR—specifically, depth. This approach overcomes the limitations of traditional 2D visualizations, offering users a more intuitive and efficient way to analyze complex data flows. A full paper was published at Multimedia 2024.
- Participated in the editing of a book. "**Conveying Culture Through Numbers, Illuminating Truth Through Data: The Digital Strategy for Cultural Industries in the New Era**" This work draws on international experiences in cultural industry digitalization and examines the technical pathways for high-quality development. ISBN: 9787308246750.

NewSense HCI Research Lab, Donghua University **Shanghai, CN**

*Research Intern | Supervisor: **Yannan Wang*** Jan. 2024 - Sep 2024

- Led the project Proactive Olfactory Interactions[4]: By categorizing the object states and interaction distances of odor sources, a series of odor-related interactive tasks were designed. Using a user-centered gesture design approach, a gesture set for interacting with odors in virtual reality was created, and an interactive system was developed for evaluation. A full paper was submitted to CHI 2025.
- Research on human food interaction[6]. Investigating the mechanisms of interaction between taste, smell, and touch to achieve more nuanced multisensory feedback in virtual reality, aiming for implementation through minimally complex methods. A full paper was submitted to CHI 2025.

ACADEMICS SERVICE

- Reviewer: ACM Chinese CHI 2024 Oct. 2024

SELECTED AWARDS AND SCHOLARSHIPS

- Second Prize Academic Scholarship 2024
- Excellent Graduate Student 2024
- Special Award Academic Scholarship 2023
- Huawei Elite Scholarship 2023
- Five Good Graduate Student 2023
- Excellent Graduate Student 2023
- Second Prize Academic Scholarship 2019
- Second Prize Academic Scholarship 2018

SKILLS

- **Language:** Mandarin (Native), Cantonese, English: TOEFL score: 93(goal: 105)
- **Programming**: C#, Python, JavaScript(three.js), C++, Java
- **Software:** Unreal, Unity, Arduino, Android Studio, Rhino (Grasshopper), PS, Pr
- **Other:** 3D printing, Laser cutting