

# Junxian Li

<https://dinnodinosaur.github.io/> | junxianli@zju.edu.cn

## 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

- 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>
- 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>
- 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

- 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.
- 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.
- 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

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|------------------------------------|------|
| 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