

# YECHEN ZHU

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829 Secaucus Road ◇ Jersey City, NJ 07307

## SUMMARY

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Interdisciplinary innovation designer with comprehensive knowledge of technologies and sensory experience: modular products, spatial olfaction computing, wearable technologies, consumer electronics, UX/UI.

## EDUCATION

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### Rhode Island School of Design

June 2024

Master of Industrial Design

RISD Fellowship; RISD Assistantship; 2022, 2023 Fred M. Roddy Scholarship

Certificate in Collegiate Teaching in Art + Design Conferred with Collegiate Teaching Experience

### Brown University

Fall 2022

Course Registration: Biomedical Engineering Design and Innovation

### Shanghai University

June 2021

BFA in Digital Media Art

2021 Shanghai City Honor Graduate

2021 Shanghai Municipal Scholarship

## ACADEMIC EXPERIENCE

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### Printed Modular BioClay Lamp

September 2023 - May 2024

*Sustainability Design Lab, RISD; Advisor: Eduardo Benamor Duarte, Lara Davis*

Providence, RI

- Designed a modular lamp inspired by clay molecular behavior, manufactured using digital printing technology with raw materials consisting of 50% ceramic waste and 50% porcelain clay, resulting in a 10% reduction in energy consumption.

### Future HVIC

February 2024 - May 2024

*RISD Research Assistant; Advisor: Soojung Ham*

Providence, RI

- Debugged motion sensors and Delta structure servo motor linkage and ventilation time and logic control. And integrated all module circuits and helped to build a full scale installation.
- Used TouchDesigner for projection mapping on the top surface of the installation, which was synchronized with sensors and air systems to create a sensory environment and simulate experiences.

### Electronic Self-Rolling Ball

September 2022 - August 2023

*RISD Research Assistant; Advisor: Adam Smith*

Providence, RI

- Designed a unique spherical structure capable of sustained autonomous rolling. Primarily focused on internal circuitry design of the sphere, utilizing ESP32 in Access Point (AP) mode to enable remote control of servo motor operations via a web interface: forward, backward, and random motion modes.

### PlantLamp

December 2022 - June 2023

*RISD Industrial Design Department Health and Wellness Fund*

Providence, RI

- Designed a multifunctional table lamp, seamlessly integrating plant interfaces. The lamp boasts an olfactory module and a heart rate sensor, offering users a holistic sensory experience and emotional regulation.

### Inflatable Pajama

August 2021 - May 2022

*MIT Media Lab; Collaborator: Dr. Adam Haar Horowitz*

Cambridge, MA

- Innovated a cutting-edge inflatable pajama, specifically designed to target pressure points on the legs and arms during REM sleep, offering a unique approach to influencing dream narratives.
- Conducted rigorous material testing, evaluating factors like comfort, elasticity, and durability, leading to the selection of vinyl and TPU-coated nylon as prime candidates.

- Spearheaded the design process, creating intricate patterns for the inflatable structure, ensuring both aesthetic appeal and functional efficacy.

## PROFESSIONAL EXPERIENCE

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### **RISD E-Lab**

*Assistant Manager; Advisor: Soojung Ham*

September 2022 - May 2024

*Providence, RI*

- Cultivated a diverse, inclusive, and welcoming learning environment and a respectful lab culture for students and faculty.
- Led workshops about coding at the RISD Industrial Department.
- Created clear, accurate, user-friendly technical documentation, signage, and instructions for labs and equipment.

### **BrainCo, Inc**

*UX Designer; Advisor: Zhaoyi Yang*

July 2021 - November 2021

*Hangzhou, China*

- Participated in the sleep wearable project, which is launched in Nov. 2022. Mainly researched sleep products market, created early-stage sketches and 3D models, and conducted user testing for the comfort of the product around the ear area.
- Collaborated closely with a team of electronic engineers, gaining hands-on experience in the smart product development lifecycle.
- Used WordPress to add content to the website and adjust the uniformity of the image and check the location details of the various modules on the page.

## TEACHING EXPERIENCE

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### **Faculty of Record**

*Rhode Island School of Design*

January 2024 - February 2024

*Providence, RI*

- Conducted a series of lectures and workshops to teach students to design different patterns using TPU, Vinyl, silicone and other materials to make shape-changing objects, as well as programming techniques of Arduino and DIY capacitive sensors.

### **Teaching Assistant**

*RISD Professor Soojung Ham's Interactions and Connections for the Human Mind course*

Spring 2023, Fall 2023

*Providence, RI*

- Offered dedicated technical guidance to students outside of regular class hours, focusing on the application of Arduino technology in their projects.

## PUBLICATION

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1. **Ye Chen Zhu.** Cultivating a Green Interface: Exploring the Potential of Human-Product Interaction Based on Plant Interfaces. (2024) IDSA International Design Conference & Education Symposium
1. **Ye Chen Zhu.** Waste Illuminates Worlds: Printed Modular Lamp Design Based On Brick and Clay Tile. (2024) Masters Theses. 1327. <https://digitalcommons.risd.edu/mastersthesis/1327>.
2. CHI 2023 Workshop: Living Bits and Radical Aminos presentation - PlantMax: Exploring The Musical Interface Between Human And Plant Conversations.
3. **Ye Chen Zhu.** Divcap: A Smart Nightcap that Promotes Sleep through the Five Senses. 2020 5th International Conference on Automation, Control and Robotics Engineering (CACRE), Dalian, China, 2020, pp. 744-748, doi: 10.1109/CACRE50138.2020.9230016.
4. **Ye Chen Zhu.** (2020, Mar.). Design of olfactory information visualization - Olfactory AR Watch 'oWatch', published in 'Design' Journal (sponsored by China Industrial Design Association)

## AWARD

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**Core77 Design Awards Emerging Technologies Awards 2024**

**Terra Carta Design Lab**

**Industrial Designers Society of America Student Merit Award**

**17th Annual International Design Awards (IDA)**

**12th User Experience Design Award (UXDA)**

Student Notable

RISD Top 10 Finalist

RISD Semifinalist

Silver & Bronze

Bronze

## SKILLS

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### **Software**

Adobe Creative Suite, Figma, Sketch, Rhino, Keyshot, Arduino, Max/ Msp, Clo3D, p5js

### **Design**

Product Strategy, Rapid Prototyping, Wireframing, Persona, Storyboarding

### **Fabrication**

Laser Cutting, Metal Lathe, Milling Bed, 3D printing, Sewing, Shoemaking, Metal CNC