YECHEN ZHU

http://www.zhuyechen.com/ ◇ (401) · 328 · 0113 ◇ zhuyechen666@gmail.com
3646 Sylvan Ct ◇ Virginia Beach, VA 23453

SUMMARY

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

EDUCATION

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

Shanghai University *June 2021*
BFA in Digital Media Art

2021 Shanghai City Honor Graduate, 2021 Shanghai Municipal Scholarship

PROFESSIONAL EXPERIENCE

Virginia Aquarium & Marine Science Center November 2024 - Present
Exhibits Technician II; Supervisor: Steve Lacy *Virginia Beach, VA*

- Retrofitted old exhibits with Arduino-controlled sensor systems, preserving original structures while enhancing functionality.
- Translated abstract marine science into tangible, age-appropriate interactions by designing educational kits (e.g., jellyfish lifecycle).
- Designed an interactive stingray tail mechanism to visualize biological behavior through tactile engagement.
- Developed a remote-controlled pan-tilt camera system for live animal observation using RS485 protocol to interface an ESP32 microcontroller with the camera hardware.
- Designed and hand-built an in-house interactive exhibit simulating coral spawning, using an Arduino-controlled blower fan to mimic gamete release. Fabricated the structure from wood, aluminum extrusion, and 3D-printed components, integrating digital fabrication with scientific storytelling.

RISD E-Lab September 2022 - May 2024
Research Assistant; Advisor: Soojung Ham *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 July 2021 - November 2021
UX Designer; Advisor: Zhaoyi Yang *Hangzhou, China*

- Participated in the sleep wearable project. 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.

ACADEMIC EXPERIENCE

Printed Modular Biobrick Lamp September 2023 - May 2024
Sustainability Design Lab, RISD; Advisor: Eduardo Benamor Duarte, Lara Davis, Soojung Ham *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.

- This project was selected as a RISD finalist in the Terra Carta Design Lab, an international sustainability competition launched in 2021 by His Majesty King Charles III (formerly the Prince of Wales) and Sir Jony Ive in collaboration with the Royal College of Art. It was exhibited at the Fifth Avenue Hotel and New Lab during Climate Week NYC 2024.

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.

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.

TEACHING EXPERIENCE

Faculty of Record January 2024 - February 2024
Rhode Island School of Design *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 Spring 2023, Fall 2023
RISD Professor Soojung Ham's Interactions and Connections for the Human Mind course *Providence, RI*

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

PUBLICATION

1. **Yechen Zhu**. 2025. Cultivating a green interface - Exploring the potential of human-product interaction based on plant interfaces. In Proceedings of the Nineteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '25). Association for Computing Machinery, New York, NY, USA, Article 55, 1–5. https://doi.org/10.1145/3689050.3706006

2. **Yechen Zhu**. Cultivating a Green Interface: Exploring the Potential of Human-Product Interaction Based on Plant Interfaces. (2024) IDSA International Design Conference & Education Symposium

3. **Yechen Zhu**. Waste Illuminates Worlds: Printed Modular Lamp Design Based On Brick and Clay Tile. (2024) Masters Theses. 1327. https://digitalcommons.risd.edu/masterstheses/1327.

4. **Yechen 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.

5. **Yechen Zhu**. (2020, Mar.). Design of olfactory information visualization - Olfactory AR Watch 'oWatch', published in 'Design' Journal (sponsored by China Industrial Design Association)

AWARD

Core77 Design Awards Emerging Technologies Awards 2024	Student Notable
17th Annual International Design Awards (IDA)	Silver & Bronze
12th User Experience Design Award (UXDA)	Bronze

SKILLS

Software	Adobe Creative Suite, Figma, Sketch, Rhino, Keyshot, Max/ Msp, Clo3D, p5js
Hardware & Prototyping	Arduino, ESP32 (RS485), Laser Cutting, 3D Printing, CNC Milling, Metal Lathe, Shoemaking
Design Methods	Product Strategy, Wireframing, Persona, Storyboarding, Rapid Prototyping