

Yunkai Xu

📍 State College ✉ yqx5322@psu.edu ☎ +1814-280-6040 🔗 Xuyk021@github.io in LinkedIn-Yunkai
📁 Design Portfolio 🎓 Google Scholar

Education

-
- Penn State University** Aug 2024 - Now
Ms in Informatics
- GPA: 4.0/4.0
 - **Advisor:** Dr. Saeed Abdullah
 - **Coursework:** Data Mining, Foundation of Human-centered Design, HCI Research Method, Human-centered AI
- Zhejiang University** Sept 2020 - June 2024
BS in Industrial Design
- GPA: 3.97/4.0 6/55
 - **Advisor:** Dr. Guanyun Wang, Dr. Wei Xiang
 - **Coursework:** Information Product Design, Information & Interaction Design, User Experience Design, Computer Game Programming

Experience

-
- Research Internship** State College, USA
Pennsylvania State University November 2024 - NOW
- Contributed to an GPT-based voice assistant to deliver cognition simulation therapy for people with dementia.
 - Leading a project to investigate the ability of LLMs to provide therapy for multilingual people.
- Research Internship** South Bend, USA
The University of Notre Dame June 2025 - July 2025
- Developed a VR platform for studying social interaction across in-person, online, and virtual scenarios.
- Research Internship** Hangzhou, China
International Design Institute of Zhejiang University April 2023 - April 2024
- Contributed to an AI-based AAC tool and 3D printing projects in the laboratory and submitting to CHI'24, UIST'24.
 - Submitted a paper to CHI'24 as **the first student author**.
 - Submitted a paper to UIST'24 as **the second student author**. (Accepted, 26%)
- Core Founder Member** Hangzhou, China
Pixel Leap April 2022 - April 2023
- Worked as a character animator (Unity engine)
 - Created character animations using motion capture devices and wrote animation scripts in Unity.

Publications

Visit my [personal website](#) or [Google Scholar](#) for more latest publications.

- Xhair: 3D Printing Hair-like Structures with Multi-form, Multi-property and Multi-function** Oct 2024
Guanyun Wang, Junzhe Ji, **Yunkai Xu**, Lei Ren, Xiaoyang Wu, Chunyuan Zheng, Xiaojing Zhou, Xing Tang, Boyu Feng, Lingyun Sun, Jiaji Li
[\[Full Paper\]](#) [🔗](#)
- SocializeChat: a GPT-based AAC Tool for Social Communication Through Eye Gazing** Oct 2023

Yuyang Fang, **Yunkai Xu**, Zhuyu Teng, Zhaoqu Jiang, Wei Xiang
[\[Full Paper\]](#) [🔗](#)

Projects

SocializeChat

[\[View PDF\]](#) [🔗](#)

- Designed a mobile application with ChatGPT for people with physical disabilities, helping them to have fluent and engaging social conversations with others.
- Tools Used: Swift, Python, User Study, Figma, Research Writing

SmartLumina: In-car Lighting Interactive Design

[\[View PDF\]](#) [🔗](#)

- Developed a new interaction system designed for both autonomous drivers and regular passengers familiar with these vehicle conditions, enabling natural interaction through gestures and provides relaxing feedback through lighting.
- Tools Used: User Study, Python, Arduino

MOgic: Haptic Feedback Gloves for Museum Interaction

[\[View Video\]](#) [🔗](#)

- Developed a new interaction system with a haptic gloves in museums, which helps visitors to
- Tools Used: Unity, Leap Motion, C#, Embedded Development

Chasing: A VR Parkour Game

[\[View PDF\]](#) [🔗](#)

- The theme style of this VR parkour game is “Data Punk” parkour game. Players experience the game from a first-person perspective and interact using VR controllers.
- Tools Used: Unity, C#, Oculus Development

Glacial Data: A data visualization project

2022

- Visualized glacial melting data in recent 100 years
- Tools Used: Data Visualization

Memotion Diary

2022

- Designed a WeChat mini program, which allows users to record their emotions in a diary every day and review them repeatedly in the future.
- Won **the third prize in East China**.
- Tools Used: Web Development, HTML/CSS

Honors and Awards

2024 Outstanding Undergraduate Thesis

2020 - 2022 Academic Excellence Student Model

2020 - 2022 Third Prize, Academic Scholarships of Zhejiang University

2022 Third Prize in East China, China Collegiate Computing Contest

2022 Second Prize, Zhejiang University Industrial Design Competition

Technologies

Languages: C++, C, Java, Python, C#, HTML/CSS

Technologies: Oculus, Arduino

Languages: TOFEL(108)