

ADAM Yuzhen Zhang

Adamyuzhenzhang.github.io
adam.zhang.yz2332@yale.edu
607-262-3859
900 Chapel Street, New Haven, CT, 06510

Education

2023 - Present	Yale University - Graduate School of Arts & Sciences Ph.D. in Computer Science Computer Graphics Group, advised by Julie Dorsey
2021 - 2023	Cornell University - Jacobs Technion-Cornell Institute at Cornell Tech Dual Master of Science Degrees: Information Systems (Cornell); Applied Information Science (Technion) Cumulative GPA 4.077/4.3.
2016 - 2021	Cornell University - College of Architecture, Art, and Planning Bachelor of Architecture; Computer Science Minor Thesis: “ <i>VR Anthropocene – Spatial Composition Through Virtual Locomotion</i> ” Advisors: Jenny Sabin and Sasa Zivkovic Cumulative GPA 3.856/4.3.
2017 & 2019	Cornell in Rome Fall 2019 Architecture Design Studio, augmented by field trips and history seminars Summer 2017 Imagining Rome: Art Studio and Creative Writing Workshops in Italy

Publications

- [1] Sharon Yavo-Ayalon, **Yuzhen (Adam) Zhang**, Ruixiang (Albert) Han, Swapna Joshi, Fanjun Bu, Cooper Murr, Lunshi Zhou, Wendy Ju. Behind the scenes of CXR: Designing a Geo-Synchronized Communal eXtended Reality System. DIS 2024, July 1-5, 2024. Copenhagen, Denmark. Honorable Mention Award
- [2] **Yuzhen (Adam) Zhang**, Ruixiang (Albert) Han, Ran Zhou, Peter Gyory, Clement Zheng, Patrick C. Shih, Ellen Yi-Luen Do, Malte F Jung, Wendy Ju, Daniel Leithinger, “Wizard of Props: Mixed Reality Prototyping with Physical Props to Design Responsive Environments”, TEI ‘24 Pictorials.
- [3] Sharon Yavo-Ayalon, Swapna Joshi, **Yuzhen (Adam) Zhang**, Ruixiang (Albert) Han, Narges Mahyar, and Wendy Ju. 2023. "Building Community Resiliency through Immersive Communal Extended Reality (CXR)" Multimodal Technologies and Interaction 7, no. 5: 43.

Research Experiences

2024 Aug - Present	Research Assistant; Computer Graphics Group at Yale, New Haven, CT Advisor: Professor Julie Dorsey <ul style="list-style-type: none">- <i>Reimagining Sketch Primitives</i> (ongoing): Investigating representation mediums for 3D modeling and spatial design applications.
2022 Jan - 23 May	Research Assistant; Future Automation Research Laboratory at Cornell, NYC Advisors: Wendy Ju, Daniel Leithinger (THING Lab, ATLAS Institute, CU Boulder); <ul style="list-style-type: none">- <i>Communal eXtended Reality</i> [1,3]: Developed a communal XR bus tour to narrate possible impacts of climate change for community engagement.- <i>Wizard of Props</i> [2]: Designed and developed interactive design systems combining physical props with virtual interaction.- <i>XC Walking</i>: Created a digital twin of key sections of NYC.

2022 Jun - Aug	Research Intern; XR Collaboratory at Cornell, NYC - Advisor: Harald Haraldsson - Assisted the development of course <i>CS5650 / INFO5340 Virtual and Augmented Reality</i> . - Designed and developed a custom Unity XR package from scratch based on OpenXR. - Implemented tracking, locomotion, and interaction for Oculus VR. - Created unit tests, documentation, and guidelines for student use.
2020 Jun - Aug	Research Associate; Virtual Places VR Research Lab at Cornell AAP, Ithaca, NY Advisor: Henry Richardson - Worked in a team of three to extend the city generation plugins WREN and Vitruvio in Unreal Engine 4. - Developed a Section plugin for creating and displaying cuts through meshes; and an AI Pedestrian Simulation plugin for studying pedestrian circulation in urban environments. - Implemented 2D and spatial interfaces for both tools to be used in VR.

Teaching

2024 - Present	Teaching Fellow; Yale University, New Haven, CT - CPSC 478/578 Computer Graphics with Professor Theodore Kim. - CPSC 479/579 Advanced Topics in Computer Graphics with Professor Julie Dorsey - CPSC 4791/5791 Building Game Engines with Senior Lecturer Mike Shah - Held office hours; Graded assignments and exams; Assisted in creating course materials.
2022 May - Jun	Graduate Student Lecturer; Cornell University, Ithaca, NY - Designed and taught <i>ARCH1510 Introduction to Virtual and Augmented Reality</i> , 3 credits. - Lectured and guided individual projects to help students explore VR's role in an iterative design workflow using Gravity Sketch and Unreal Engine 4. - Developed a template VR project in Unreal to support students' designs, coupled with documentation. Curated a VR exhibition to showcase the applications built by students.
2022 Aug - 23 May	Student Academic Assistant; Cornell Tech, NYC - For <i>CS 5650 / INFO 5340 Virtual and Augmented Reality</i> and <i>CS 5678 Topics in Mixed Reality</i> by Director Harald Haraldsson. - Created and graded two VR assignments on locomotion and interaction. - Guided students' final projects on developing a generative VR design tool.

Employments

2025 June - Aug	PhD Software Engineering Intern; VCV, Apple Inc., SCV, CA Designed and prototyped an Apple Vision Pro application that grounds LLMs in reality by building a spatial perception pipeline and an episodic memory system using ARKit and multi-modal LLMs.
2024 May - Aug	PhD Software Engineering Intern; VCV, Apple Inc., SCV, CA Developed a motion capture application for Apple Vision Pro. Explored content creation within VisionOS, leveraging gestural input and immersive visualization.
2022 Dec - 23 Aug	Startup Intern (Part Time); UrbanMix, NYC Developed an interactive 3D phone app that visualizes the renting states of NYCHA buildings to automate decision-making and increase developers' returns.
2019 May - Jul	Architectural Assistant; Malfona Petrini Architetti, Rome, Italy Worked for Professor Lina Malfona; analyzed historical and local architecture at Formello Rome; worked with local clients to develop drawings and models for the conceptual design of a villa.

2017 Jun - Aug	Intern Architect; BJTU Architectural Survey & Design Co., Ltd., Beijing, China Analyzed zoo typologies for the design of an elephant house; Created diagrams and drawings for presentation; learned the process of architectural design.
----------------	--

Activities

2019 Nov	Lighting Designer; Locally Grown Dance; Cornell PMA, Ithaca, NY Participated in stage lighting design for local dancers in Ithaca
2019 Jun	Presenter; Polit(t)ico Research Lab; University of Pisa, Pisa, Italy Theoretical research on the duality of the collective (politico) and politics (politico) through the design of an (absent) curatorial architecture; presented panoramic renderings on the Polit(t)ico workshop in comparative literature, art, and architectural design.
2018 May - Aug	Team Member of BJTU; Solar Decathlon 2018; Dezhou, China Collaborated with students from Beijing Jiaotong University and local contractors; constructed a two-story net-zero residential villa.
2017 Feb - Apr	Museum Curator; Herbert F. Johnson Museum of Art; Ithaca, NY Curated the show “Power, Haunting, and Resilience” along with faculty; worked especially on a themed exhibition “Remaining Echo: Facets of Haunting in Asian Art”.

Honors

2023	Winner; Rendering Contest for CPSC 478/578 at Yale Rendered a short film, <i>Galactic Leaps</i> , with a ray tracer built from scratch in C++
2021 - 2023	Cornell Tech Merit Scholarship Amount: \$60,000
2021	Clifton Beckwith Brown Memorial Medal, Cornell AAP This medal is awarded to one graduating student who has attained the highest cumulative average grade in architectural design over the entire course of study.
2019 - 2021	Dean's List Spring 19, Fall 19, Fall 20, Spring 21
2020 - 2021	Cornell Guorong Jiang Merit Scholarship & Cornell International Scholarship Two years of full tuition
2017	Winner; Cornell Architecture Baird Prize Nature-watching-station design competition at Cornell AAP.

Technical Skills

Interaction Engines Unity, Unreal Engine, Twinmotion, A-Frame for WebXR

Computer Languages Swift/SwiftUI, C++, C#, Python, Java, Javascript

Design Tools 2D: Adobe Creative Suite, AutoCAD
3D: Rhinoceros, Grasshopper, Blender, V-Ray, Lumion
XR: Arkio, Gravity Sketch, Tilt Brush

Prototyping Tools 3D Printer, Laser Cutter, CNC, Raspberry Pi, Arduino