Ruyan Chen

Digital Humanities | Computational Media | AR/VR/MR

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EDUCATION

Duke University, Durham, NC   Aug. 2023 – Dec. 2024
M.A. in Digital Art History/Computational Media (Computational Media Track)

Primary Coursework: Historical & Cultural Visualization | Games, Play, and Selfhood | Generative Media

New York University, New York, NY   Fall 2020 – May 2023
B.S. in Media, Culture & Communication

Primary Coursework: Digital Media Theory and Practice | Metaverse Seminar | Creative Coding

University of Miami, Miami, FL   Fall 2019 – Spring 2020
B.S.C. in Broadcast Journalism (30 credits)

PROJECTS & RESEARCH

Designer & Developer, **Mixed Reality in Museum Master's Thesis Project,** Durham, NC   Jun. 2024 – Dec 2024
- Independently managed the end-to-end development of a mixed reality museum experience using Unity and Quest 3 at the Nasher Museum of Art
- Researched analog and digital approaches to enhancing visitor engagement and learning in museums
- Captured Andean artifacts through photogrammetry
- Researched Andean cultures and histories, and designed and built quests and puzzles in Unity to achieve gamified learning
- Wrote a captivating narrative that connected the puzzles based on the research
- Collaborated with the curator of the gallery to ensure the experience align with the museum's goals
- Designed and built 3D character using Character Creator 4
- Designed and made 3D traditional Peruvian clothing using Marvelous Designer
- Used Convai to create an AI NPC who can not only respond to the player but also initiate dialogue or perform specific actions based on certain conditions.
- Balanced education and entertainment, providing museum visitors with deeper insights into artifacts through engaging and interactive elements

Creator, **Bio-Art Project**, Durham, NC   Aug. 2023 – Apr. 2024
- Created an interactive bioart project using slime mold's memristive properties to transform human-drawn pixel art into dynamic visual output using microcontroller, CircuitPython, P5.js
- Cultivated slime mold
- Built and assembled receptacles as part of the circuit using Houdini and 3D printers
- Explored slime mold's ability in creating generative output and the potential of co-creation between human and living organism

Developer, **Interactive Media Project**, Durham, NC   Apr. 2024
- Created an interactive digital simulation of slime mold that changes its behaviors based on how users care for it
- Developed using a microcontroller and P5.js

Designer, **Projection Mapping Project**, Durham, NC   Mar. 2024
- Used TouchDesigner and a projector to transform an irregular surface into an architecture and create dynamic climbing animation

Designer, **3D Modeling and Printing Project**, Durham, NC   Feb. 2024 – Mar. 2024
- Created a series of 3D models of hands and artifacts to convey the story of the often-prohibited act of touch in museums
- Developed using Houdini and 3D printers

Researcher and leader, **New Media Research Project**, New York, NY   Sept. 2022 – Dec. 2022
- Led my group in producing a video explaining censorship issues of Twitter
- Researched algorithmic bias, its underlying causes and biases of Twitter's algorithms. Produced a video covering these topics using Premiere Pro.

Designer, **Service Design Project**, New York, NY   Aug. 2022 – Oct. 2022
- Developed an interactive game using P5.js to raise awareness about data exploitation in the metaverse
- Made collages of images to create visual illustrations of the disproportionate impacts received by the marginalized groups in both the digital and physical world

Designer, **VR Murder Mystery Game**, New York, NY   May 2022 – July 2022
- Wrote the script for the murder mystery game "Voyage At Sea"
- Created 3D characters using MetaHuman
- Created images relevant to the game facilitate the storytelling of the game using Adobe Photoshop
- Built a 3D cruise ship suite with the murder scene using Unreal Engine
- Wrote a product requirement document for future development of this VR murder mystery game

Core Member, **Metaverse Project**, New York, NY   Jan 2022 – May 2022
- Worked with group members on a prototype requirement document that focused on providing the details for the construction of a metaverse for developers
- Created a user interface using Figma and built a 3D PvP room of the metaverse using Unity

Researcher and developer, **Project on Climate Change and Precarity,** New York, NY   Sept. 2021 – Dec. 2021
- Researched the disproportionate impacts of climate change on women from Hongpo Village in China
- Created a multi-media website—videos, photoshopped images, audios—on climate change and gender inequality using HTML/CSS, Adobe Photoshop, Premiere Pro and Audition
- Proposed a pitch to the Office of People's Government of Deqin County to ask for more health aid and promoting women's role in climate change policy making

EXHIBITIONS

Ruyan Chen, (2024), "Generative Living Pixels" exhibited at Duke University BASS CONNECTIONS Laboratory Art in Practice Exhibition in April 2024, Durham, USA.

PUBLICATIONS

Chen, Ruyan. "Virtual Home for College Couple in Long-Distance Romantic Relationships", IOP Journal of Physics: Conference Series (Print ISSN: 1742-6588) or Applied and Computational Engineering (Print ISSN: 2755-2721)

SKILLS

- Unreal engine, Unity
- AI NPC: Convai
- MetaHuman, Character Creator
- 3D modeling: Houdini
- 3D Fashion Design: Marvelous Designer
- Visual development: TouchDesigner
- P5.js
- Physical Computing: Arduino, Circuitpython
- Web design: HTML/CSS
- Software: Adobe Photoshop, Premiere Pro, Audition, Illustrator; Excel, Word, PowerPoint
- Basic SQL

RELEVANT WORK EXPERIENCE

VR Tour Guide, **Multimedia Project Studio**, **Duke University**, Durham, US   Sept. 2024 – Dec 2024
- Performed VR demos showcasing devices such as Vision Pro, Quest 3, and Vive for students
- Assisted Duke students in having hands-on experience with VR devices and troubleshooting issues around game engines and VR devices

Game Design Intern, **MetaCube Lab, Shanghai Jiaotong University**, Shanghai, China   Jun. 2023 – Aug. 2023
- Led the team in creating game assets, which included 500+ Metahumans and usable hand gestures.
- Collaborated with artists to build a 3D model of the Wenbo Museum
- Built a game environment using Unreal Engine and wrote a tutorial for level design.
- Constructed framework for the functionality of hand gesture, voice, and Metahumans' motions.

Data Analysis Intern, **Newrank.cn,** Beijing, China   Jun. 2022 – Aug. 2022
- Conducted public sentiment analysis for AstraZeneca and analyzed live selling videos on TikTok
- Used Excel to categorize and analyze more than 100,000 sets of data
- Generated data visualizations to demonstrate the comparison, timeline, and significant insights

Marketing Intern, **CaSearching Consulting,** Wuxi, China   Jan. 2021
- Produced a TikTok video from script writing, recording to editing, to introduce blue collars to a factory
- Tracked and analyzed data about the company's TikTok marketing videos to improve their quality

HONORS AND AWARDS

Harvard XR Ideathon Finalist Certificate   April 2025

Digital Art History/Computational Media MA program Research Fellowship, Duke University   Apr. 2024

New York University Founders Day award, New York University   Apr. 2023

Dean's List for Academic Year, New York University   Fall 2021 – Spring 2022

President's and Provost's Honor Rolls, University of Miami   Fall 2019