Cyrus Vachha

(510) 789-9240 cvachha@princeton.edu, cvachha@berkeley.edu, cvachha549@gmail.com

Website | LinkedIn | Youtube | Github

2nd Yr Ph.D. Student at Princeton University, Computer Science
UC Berkeley: EECS M.S. GPA: 4.0 (2023-2024), Computer Science B.A. GPA: 3.83 (2019-2023)

Berkeley coursework: CS 61C: Machine Structures, Data 100: Principles and Techniques of Data Science, CS 188: Introduction to Artificial Intelligence, CS 184: Foundations of Computer Graphics, CS 189: Introduction to Machine Learning, VIS SCI 260D: Seeing in Time, Space, and Color, CS 160: User Interface Design and Development, CS280A: Intro to Computer Vision and Computational Photography, CS 294-137: Immersive Computing and Virtual Reality, CS 284B. Advanced Computer Graphics Algorithms and Techniques, CS280: Graduate Computer Vision

Skills

VR/AR Experience Designer, Python, Java, C++, C#, Unity Certified Developer, VFX, 3D Modeler in Autodesk Maya, Autodesk 3ds Max, and Blender, Unreal Engine, Alexa Skills Developer, Human-Computer Interaction Research, NeRFs, 3D Gaussian Splatting

Experience

Princeton University 2024-Present - *PhD Student*
- Situated Interactions Lab Ψ advised by Prof. Parastoo Abtahi working on VR/AR and Gaussian Splatting projects

Microsoft Research Summer 2023 - *Research Intern*
- Research Intern in the EPIC group working on HCI and NeRF graphics projects

Microsoft Summer 2022 - *Intern*
- Software engineer intern in the Surface DVSE Camera and Display team

UC Berkeley 2021 - 2024 - *Research Intern*

- Masters Thesis:Dreamcrafter Imagining Future Immersive Radiance Field Editors with Generative AI
- **Publication**: Dreamcrafter: Immersive Editing of 3D Radiance Fields Through Flexible, Generative Inputs and Outputs - **CHI** 25 Paper. VR interface for editing 3DGS/NeRF scenes with AI tools (site)
- Contributions to Nerfstudio: Worked on features including VFX and VR video rendering as part of the Nerfstudio team. (more info)
- Project on asymmetrical communication between VR and non VR users through Unity and web servers, in the lab of Prof. Björn Hartmann.
- **Publication**: WebTransceiVR: Asymmetrical Communication Between Multiple VR and Non-VR Users Online - **CHI** EA '22: Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems · Apr 28, 2022
- Project: StreamFunnel: Facilitating Communication Between a VR Streamer and Many Spectators

Kinshapes/Ibariki Media 2018 - 2020 - *Intern*
- Creating VR experiences/projects, and experience with integrating 3D volumetric captures into a VR project. Worked on a historical VR app on the life of George Horton for Dr. Cecil Brown, Stanford University

Blaze Game Studios 2014 - 2019 - *Co-founder*
- Conducted Lua, Java, and Mobile Game Development camps for middle and high school students and developed mobile apps for iOS and Android

Mission San Jose High School VR/AR Club 2017 - 2019 - *Co-founder and President*
- Developed curriculum for high school students VR/AR development and 3D modeling

Projects

SplatXR - Open source Gaussian Splatting Unity toolkit for XR applications. [in progress]
Instruct-GS2GS - Editing 3D Gaussian Splatting scenes with text. Links: Site, Code
Nerfstudio VFX Blender Add-on - Developed a Blender add-on to allow for integration of open source project Nerfstudio NeRF (Neural Radiance Field) renders with Blender for visual effects, used in production/industry. Links: Documentation, Demo, Arxiv writeup (2023)
Medical VR Experience on Dysautonomia - Educational medical VR experience. Materials and Stanford Big Data Conference 2019 Poster found here
Block Dash VR - Mobile VR game developed in Unity on Google Play Store (2017)
Alexa Skills - Published 15 Amazon Alexa Skills with overall of 2,000+ enables (2016-)

Awards

Eugene L. Lawler Award - Berkeley EECS - 2022, Gayle Meyers Award - MSJHS - 2019, Unity Certified Developer - 2017 (Certification id: 201703UCD1659), First 1000 Alexa Skills Developer - 2016, Best Application Award CodeDay - 2015, Top 250 Intel RealSense App Challenge 2014