

EDUCATION	Yale University B.S. Computer Science, GPA 4.0 Coursework Data Structures, Algorithms, Systems Programming, Operating Systems, Computer Graphics, Parallel Programming, Discrete Math, Linear Algebra Leadership Co-President, Design at Yale; Creative Director, The New Journal	New Haven, CT 08/2019 – 05/2023
EXPERIENCE	Meta Reality Labs Software Engineer Intern <ul style="list-style-type: none">Worked on the SLAM tracking and spatial mapping team for the Oculus line of 6DOF headsets.Updated spatial map storage to improve the scalability of the SLAM stack in Meta's <i>Presence Platform</i>.Used C++, adb debugging.	Burlingame, CA 05/2022 – 08/2022
	Facebook Software Engineer Intern <ul style="list-style-type: none">Designed & developed scheduler service to rebalance Twine jobs and containers for stateful services. Improved fault tolerance and machine utilization; preliminary data shows up to 40k machines freed.<i>Twine</i> is Facebook's cluster management system used to deploy and manage applications.Used Python, Thrift, and Twine scheduler API to perform asynchronous task moves.	Remote 06/2021 – 08/2021
	Yale Peabody Museum Lead Developer <ul style="list-style-type: none">Led work on COPISClient, a desktop app which controls a multi-gantry photogrammetry imaging system.Implemented toolpath generation, ViewCube navigation, OBJ importing, and scene object picking.Implemented programmable OpenGL pipeline with shaders, reduced frame render times by >80%.Used Python, C++, OpenGL, GLM, GLSL. <i>Project link</i>.	New Haven, CT 07/2020 – 05/2021
	Software Developer Intern <ul style="list-style-type: none">Redesigned UI, refactored entire directory structure and 3D viewport. Implemented arcball navigation.Used Python, wx, OpenGL, C++.	06/2020 – 07/2020
PROJECTS	OS Dev <ul style="list-style-type: none">2021. Implemented memory-mapped VGA 640×480 16-color video mode and syscalls in mCertiKOS. Added keyboard interaction and ability to playback GIFs. Used C, Assembly. <i>Demo video link</i>.	
	Graphics <ul style="list-style-type: none">2022. Implemented watercolor simulation techniques in <i>Curtis et al. 1997 Computer-Generated Watercolor</i>. Created a real-time watercolor simulation with pigment flow effects such as edge darkening, backruns, blooming, and granulation. Implemented forward Euler integration, staggered grid, used C++. <i>Project link</i>.2021. Wrote ray tracer and video animation in C++. Implemented diffuse/Phong shading, mirror/glossy reflections, refractions/fresnel effects, soft shadows, supersampling, BVH, .obj loading. <i>Final render link</i>.2019. Created an interactive WebVR experience to visualize 3D surfaces in the <i>DLMF</i> dataset. <i>Project link</i>. Work presented at the SIGGRAPH 2018 BOF session <i>Immersive Visualization for Research, Science and Art</i>.	
	WebVR <ul style="list-style-type: none">2019. Created Bulletin, a WebVR bulletin board for posting anonymous messages. Used A-Frame, Three.js. Won the Best Gaming/VR Hack at YHack 2019, out of 140+ submissions & 400+ participants. <i>Project link</i>.	
SKILLS	Coding C++, C, Python, Java, Bash, Thrift, Racket — Learning Assembly, JS, HTML/CSS Tools UNIX, Git, OpenGL, Figma, Adobe Illustrator, Adobe InDesign	