

Education	<b>Yale University</b>	<b>08.2019 – 05.2023</b>
	B.S. Computer Science (GPA 4.0)	New Haven, CT
	<b>Coursework</b> Data Structures, Algorithms, Systems Programming, Operating Systems, Computer Graphics, Parallel Programming, Discrete Math, Linear Algebra	
	<b>Leadership</b> Co-President, Design at Yale; Creative Director, The New Journal	
Experience	<b>Software Engineer Intern</b>	<b>05.2022 – 08.2022</b>
	Meta Reality Labs (Burlingame, CA)	
	<ul style="list-style-type: none"><li>Enhanced spatial map storage to improve the scalability of the SLAM stack for Meta's <i>Presence Platform</i>. Considered device power draw and memory performance limitations.</li><li>Worked on the SLAM tracking and spatial mapping team for Oculus 6DOF headsets.</li><li>Used C++, Bash, adb debugging.</li></ul>	
	<b>Software Engineer Intern</b>	<b>06.2021 – 08.2021</b>
	Facebook (Menlo Park, CA)	
	<ul style="list-style-type: none"><li>Developed an internal service to automatically rebalance Twine jobs and containers for stateful services. Improved fault tolerance and machine utilization, freed up to 40k machines across all data centers. <i>Twine</i> is Facebook's cluster management system.</li><li>Used Python, Thrift, SQL, async Twine API.</li></ul>	
Projects	<b>Lead Developer</b>	<b>06.2021 – 08.2021</b>
	Yale Peabody Museum (New Haven, CT)	
	<ul style="list-style-type: none"><li>Led work on COPISClient, a desktop app which controls a imaging system for photogrammetry. Rewrote programmable OpenGL pipeline with shaders, reducing frame render times by &gt;80%.</li><li>Redesigned GUI. Designed toolpath generation, ViewCube navigation, and scene object picking.</li><li>Used Python, C++, OpenGL, GLM, GLSL. <a href="#">Project link</a>.</li></ul>	
	<b>Watercolor paint simulation</b>	<b>2022</b>
	<ul style="list-style-type: none"><li>Developed real-time watercolor simulation in C++ with pigment flow effects based on the SIGGRAPH paper <i>Curtis et al. 1997 Computer-Generated Watercolor</i>. Implemented edge darkening, backruns, blooming, and granulation. Built staggered grid, used forward Euler. <a href="#">Project link</a>.</li></ul>	
	<b>Distributed ray tracer &amp; animation</b>	<b>2021</b>
Skills	<ul style="list-style-type: none"><li>Developed ray tracer and video animation in C++. Implemented diffuse/Phong shading, mirror/glossy reflections, refractions/fresnel effects, soft shadows, and supersampling anti-aliasing.</li><li>Implemented bounding volume hierarchy (BVH), .OBJ loading. <a href="#">Final video link</a>.</li></ul>	
	<b>VR math visualizations</b>	<b>2019</b>
	<ul style="list-style-type: none"><li>Developed an interactive WebVR experience to visualize 3D math surfaces in the <i>DLMF</i> dataset.</li><li>Demod at the SIGGRAPH 2018 BOF session "<i>Immersive Visualization for Research, Science and Art</i>". <a href="#">Project link</a>.</li></ul>	
	<b>WebVR bulletin board</b>	<b>2019</b>
	<ul style="list-style-type: none"><li>Developed Bulletin, a WebVR bulletin board for anonymous messages. Used JavaScript, Python.</li><li>Won Best Gaming/VR Hack at YHack 2019, out of 140+ projects &amp; 400+ participants. <a href="#">Project link</a>.</li></ul>	
	<b>Coding Tools</b>	C++, C, Python, Java, Bash, Thrift, Racket, Bash — Learning Asm, JS, HTML/CSS UNIX, OpenGL, Figma, Adobe Creative Cloud (Illustrator, Photoshop, InDesign)