

## EDUCATION

UNIVERSITY of CALIFORNIA, LOS ANGELES

2020

**B.S. Computer Science**

Courses—Computer Graphics, Vision, Networks, OS, AI, Linear Algebra, Multivariable Calculus, VR Art, Game Design.

## EXPERIENCE

UNREAL VR SIMULATION &amp; TOOLS DEVELOPER INTERN

JUL '19 — DEC '19

**Intuitive Surgical**

- + Developed in Unreal Engine to create a multi-user VR design review tool for surgical robot prototypes.
- + Programmed a pipeline automation tool (Python, C++, Blueprints) to take Solidworks exports and make poseable Unreal assets, for spawning real-time in the simulation.
- + Utilized OptiTrack motion capture hardware to track and synchronize a real operating room to VR.
- + Designed a saveable VR operating room to spawn poseable robots, patients, and construct custom procedures.
- + Prototyped point-cloud and ray-marching medical visualization techniques.

UNITY VR DEVELOPER + RESEARCH ASSISTANT

MAY '17 — DEC '18

**Johns Hopkins Medicine**

- + Developed Unity game-like tasks for "Joey's Room", intended to prove VR's ability to elicit child OCD symptoms.
- + Programmed a C# serial port interface that records biometric data and includes it in the Unity data report.
- + Coded with event-based timers embedded in each task's manager to properly record the data.

TECHNICAL ARTIST + GAME DESIGNER

SEP '16 — OCT '18

**Escality Games**

- + Developed in Unity a story-driven VR escape room game—"Conjuror's Eye"—with 5 others.
- + Designed and 3D modelled maps and puzzles in Autodesk Maya and Unity as the lead designer.
- + Programmed level-managers in C# and Unity's VRTK plugin to create and organize interactive puzzle levels.

## PROJECTS

SOLE UNREAL DEVELOPER

JAN '20

**VidShift**

- + Developed a layered video-panel editor for VR playback in Unreal Engine, allowing 3D-transform editing.
- + Programmed timeline UI systems to scrub through the playback sequence and import and trim videos.
- + Designed a keyframing system to allow video-panels to move across the VR space during playback.

LEAD UNITY VR DEVELOPER + GAME DESIGNER

AUG '18

**Art Trip at UCLA**

- + Developed a narrative where a depressed Vincent Van Gogh wants to bring his painting's field back to life.
- + Tutored my team of 3 (two designers and a programmer) on Unity/VRTK development and C#.
- + Coded a quest system with tasks to be completed between two Tilt Brush worlds linked by a portal-painting.

## SKILLS

Languages	Proficient with C++, C, C#, Python, Unreal Blueprints.	Fluent: English
	Familiar with Java, JavaScript, Bash, Batch, Lisp, OCaml, HTML/CSS.	Proficient: Japanese
Technologies	Unreal Engine 4, Unity, SteamVR, Maya, Blender, Optitrack/Motive. WebGL (three.js), Arduino, Adobe Premiere, After Effects, Illustrator, HoloEdit, TCP/IP, JSON, Git.	
Skill Sets	<b>Software</b> — VR, MR, AR, Game engines, Pipeline / Tools, Client-server networks, State machines, UI. <b>Hardware</b> — Audiovisual (sound boards, switchers, and cabling), Computer building, Vive, Oculus. <b>Art</b> — Volumetric Video, 3D modelling/UVs, Animation, Film Editing, Cinematography, Motion graphics.	