



Ryan Bryce Ong

Software Engineer
Project Manager
VR Developer
3D Animator

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EXPERIENCE

PROJECTS

2019 **Generative Design in Augmented Reality**
Researcher · UC Berkeley FHL Vive Center for Enhanced Reality

Created and connected PyQt UI elements for front-end development • Applied computer graphics concepts to help manipulate and crop point clouds



2018 **Software Engineering (Robotics)**
Intern · Jet Propulsion Laboratory

Improved potential efficiency by researching and testing applications of physics simulations • Also assisted in optimizing multi-agent path planning software



2009–Present **RTWkiDS Public Speaking**
Co-Founder · Arcadia, CA

Strategical advisor for startup with over 100+ yearly clients • From a young age, worked as backstage technical manager for theatrical stage productions • Mentored 7 award-winning K-12 teams to prepare for a problem-solving improvisational competition



2020 **RocketMD Static Site Template Engine**
Python · RTWkiDS

Personal project that helped improve my design, development, and time management skills • Built from scratch, using Python, soon to be released as Open Source, and used for RTWkiDS website • Supports Markdown to HTML conversion, templating using CSV data, and pulling data from the Facebook Graph API



2019 **React Calender for Nonprofit Web App**
ReactJS · Replate

Learned ReactJS and integration with Ruby, in a time-pressure environment • Built and integrated calendar for nonprofit service web app • Won 2nd Place at the Hack 4 Social Impact Summit hackathon



2018–2019 **ARKit Facial Capture**
Lead · UC Berkeley

Developed iPhone and Python applications for facial motion capture animations from an iPhone X into Maya • **Project Manager:** planned timeline and divided tasks, helped integrate into 3D animation short • Learned Swift/Xcode in one weekend and developed iPhone streamlined app for recording facial expressions and data



TEACHING

2016–Present **Advanced Animation & UCBUGG**
Instructor, Reader · UC Berkeley

Teach all parts of the 3D modeling & animation pipeline, particularly in: pre-production, animation, shading, camera, lighting, & post-production. • **Sculpted (2019)** Shading & texturing human skin with Substance Painter and RenderMan, Scene lighting with Maya, Rendering & post-production with NukeX



2018 **CS61C: Machine Structures**
Course Tutor · UC Berkeley

Held and developed curriculum for 2 weekly tutoring sessions for Computer Architecture and memory concepts, helped in office hours, and attended staff meetings for 8 hrs/week.



2017 **CS61A: Structure & Interpretation of Computer Programs**
Course Tutor · UC Berkeley

Held 2 weekly tutoring sessions for OOP and fundamental CS concepts, graded assignments & exams, helped in office hours, and attended staff meetings for over 1000 students 8 hrs/week.



2018 **Unity VR Game Development**
Lead · UC Berkeley

Improved my leadership and communication skills by working with a four-person team • Focused on researching UX innovative ways to address player movement while minimizing motion sickness • Connected Oculus Motion Controllers to in-game vehicle • Composed custom procedural mesh generator script that creates a Tron-like collide-able tail behind the vehicle



COURSES

Graduate **CS294** Computational Color • **VS260A** Optical & Neural Limits to Vision
Undergraduate **NM190** Advanced Animation • **CS194** 3D Modeling & Animation • **CS188** AI & Neural Networks • **CS184** Computer Graphics & Physics Simulations • **CS160** User Interface Design & Development • **CS152** Computer Architecture • **CS170** Algorithms • **Music 109** Sound & Music Computing • **CS70** Discrete Mathematics & Probability • **CS61C** Machine Structures • **CS61B** Data Structures • **CS61A** Structure & Interpretation of Computer Programs

DEGREES

SKILLS

Present **EECS**
Master of Science · UC Berkeley

2015 **Computer Science**
BA · UC Berkeley

GPA: 3.5

Python · Java · Javascript · C++ · C# · Unity3D · Unreal Engine · VR · HTML & CSS · ARKit · RISC-V · Swift · Android Dev · Maya · Substance Painter