

Richard Lee

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University of Pennsylvania – School of Engineering
PHILADELPHIA, PA | CLASS OF 2017

BSE Digital Media Design, minor in Fine Arts
Cumulative GPA: 3.79/ 4.0, magna cum laude
Awarded the Dawn and Welton Becket Digital Media Design Achievement Award

Skills

Languages – C++, Java, Javascript, GLSL

APIs – OpenGL, WebGL, Three.js

Tools and Tech – Unreal Engine 4, Unity, Maya, Houdini, Renderman, glTF

Proficiencies – virtual reality, game development, computer graphics, pipeline tools

Experience

FALL 2017 - PRESENT

Baobab Studios – CG Generalist

REDWOOD SHORES, CA | WWW.BAOBABSTUDIOS.COM

Asteroids! | Interactive VR Animation | 2018 Daytime Emmy winner for “Outstanding Interactive”

- Ported Asteroids! to Android and Windows Mixed Reality platforms using Unity Engine.
- Implemented in-experience scene selection interface with real time video tiles.

Crow: The Legend | Interactive VR Animation

- Engineer and lighting artist on *Crow: The Legend*.
- Integrated an IK solution for interactivity, managed the animation import pipeline, set up various sequences, and led the 360 video renders of the experience.

SUMMER 2016

Oculus Story Studio – CG Generalist Intern

SAN FRANCISCO, CA | STORYSTUDIO.OCULUS.COM

- Implemented various pipeline tools for the shading, lighting, and animation departments.
- Built a plugin for Mari with Python to export to the Granite SDK file format.
- Implemented an analytical fog shader in a UE4 Material Function.
- Built a batch animation reimport plugin for UE4 in C++.

SUMMER 2015

Pixar Animation Studios – Pixar Undergraduate Program (PUP)

EMERYVILLE, CA | WWW.PIXAR.COM

- Played a Global Technology role in a nine person group project, creating vegetation networks and providing pipeline support.
- Created a procedural favela in Houdini as the final two week independent project.

Projects

INTERACTIVE

Pippa's Pan

UNREAL | LEAD TECHNICAL DIRECTOR
FALL 2016 - SPRING 2017

Interactive VR experience merging animation and world building with motion capture and live-action lightfield rendering. Built the project pipeline and realizing the creative vision of the project in Unreal Engine 4 and virtual reality. Won third place in the 2017 AT&T VR/AR Challenge. Showcased at the Marché du Film NEXT VR Library during the 2017 Cannes Film Festival.

Obscura

UNITY | SPRING 2016

First person puzzle game where the player must manipulate the sun and navigate the shadows cast by the level. Worked on the game design concept and gameplay implementation. Won first place in the Penn Play 2016 Game Jam.

GRAPHICS

WebGL Unified Particle System

JAVASCRIPT, WEBGL | FALL 2016

Unified particle and rigid body simulation in WebGL, using the discrete element method to calculate interparticle forces and representing rigid bodies as sets of particles to accelerate simulation.

BioCrowds Foraging

C++, STEERSUITE | SPRING 2016

Crowd simulation of an ant colony foraging for food, combining the BioCrowds space colonization algorithm for local collision avoidance and a robot swarm algorithm for global navigation.