

ZACK LAWRENCE GAME PROGRAMMER

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EXPERIENCE

HOLYSMOKE LLC Fall 2019 to Present;

Prototype Programmer for a hopeful start-up made up of industry veterans; Holysmoke.

- Quickly prototyping mechanics within **Unreal Engine** with the intention of setting a basis for a AAA quality game.
- Working heavily within the animation, post-processing, and camera systems of UE4.
- Fostering a healthy Server-Client gameplay relationship.
- Constructing in-editor interfaces for designers.

WACKTORY Fall 2018 to Fall 2019; //Personally developed in conjunction with Robits

<https://www.Wacktory.com/>



Grand Prize Award
UCSC Games Showcase 2019



Design Innovation Top 3
UCSC Games Showcase 2019



Peer Choice Top 3
UCSC Games Showcase 2019

Programmer and Game Designer for cooperative game involving Virtual Reality and traditional play.

- Picked up duties of Lead Programmer in latter half of project, tutoring and assisting fellow programmers.
- Heavy hand in programming nearly every core system, making use of inheritance, polymorphism, and 3D Math.
- Built my own controller system, player FSM, projectile path prediction, machine system, camera system, etc.
- Worked with **Unity's** VFX, animation, UI, custom editor, Script/Event Execution Order, and other systems.

ROBITS Fall 2018 to Fall 2019; //Personally developed in conjunction with Wacktory

<https://www.RobitsGame.com/>



Technical Innovation Award
UCSC Games Showcase 2019



GameGo Grant 2019 Recipient



UCSC Art Dean's Fund for Excellence Recipient

Second-in-Command Programmer for educational game centered around programming robot AI for combat.

- Developed in-game Visual Programming Language using concepts like control flow, states, and conditionals.
- Polished/debugged codebase through profiling, breakpoint surfing and reducing frame-by-frame executions.
- Developed modular tutorial system, modular robot parts, VFX, player FSM, camera systems, wall fade shader, etc.
- Worked with **Unreal Engine's** Blueprint, C++, Widget, animation, Cascade, and other systems.

SIMULATED PLANETARY BIOSPHERE Fall 2018; //Made with the help of Alex Perrotti

<https://github.com/ajperrot/cmps146P7>



1st Place
UCSC Game AI 2018 Competition

2 person project. Randomly generated Goldberg Polyhedral planets of any size with evolving simplistic creature AI.

- Planet generation in **Unity** based on a Goldberg Polyhedron overlaid with Perlin Noise.
- Simple Creature AI based on constraint satisfaction, pathfinding and behavior algorithms.



EXPERIENCE CONT...

LAZER TROUBLE Spring 2018;

<https://www.ZackRLawrence.com/lazertrouble>



Honorable Mention
UCSC Foundations of Video Game
Design 2018 Competition

1 person project. Arcade-Style Space Shooter in which your own lasers bounce off the walls around you.

- Developed tight controls with varied gameplay through power ups and enemies.
- All visuals and programming were done by myself within Photoshop and **Construct 3**.

EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

January 2016 to June 2019;

BS Computer Science:
Computer Game Design

TECHNICAL SKILLS

- **Languages:** C++, C#, Python, Blueprint (Unreal), Javascript, HLSL, Java, C
- **Software:** Unity, Unreal Engine 4, Git, P4V, Substance, Photoshop, Blender, REAPER, Construct 3
- **Other Skills:** Texture Design, Foley, Sound Engineering

OTHER EXPERIENCE

CASTAIC LION'S CLUB Summer 2008 to Present; //Community Service

Lion - Involves dozens of odd jobs from traveling Santa Clause to chauffeur to meal prep on Thanksgiving.

ZIZZO'S COFFEE HOUSE & WINE BAR June 2018 to January 2019;

Barista, Bartender and Opener - Learned to work in a fast paced environment where failure is not an option,

HAMPTON INN SANTA CRUZ December 2018 to June 2019;

Night Auditor - Ran front desk, performed accounting, worked with Security and Police to assure guest safety.

PEOPLEHUNTER.COM Summer 2012 to Summer 2017;

Skip Tracer - Located clients, witnesses and defendants for attorneys

GAMESTOP August 2015 to January 2016;

Game Adviser - Assisted customers in making informed purchases of games and game consoles.