

ZACK LAWRENCE GAME PROGRAMMER

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EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA CRUZ January 2016 to June 2019;
BS Computer Science: Computer Game Design

TECHNICAL SKILLS

Confident: C++, Unreal Engine, C#, Unity, Blueprint (Unreal), Lisp, P4V, Git
Proficient: Python, Javascript, Java, C, Photoshop, REAPER, Substance
Bonus: Texture Design, Foley, Sound Engineering, Fighting Games

RELEVANT EXPERIENCE

PlayStation Winter 2020 to Present;

Technical Game Designer for a third person action adventure game at PlayStation Visual Arts in San Diego.

- Owner, scripter, and producer of levels making up about 2 hours of curated playtime.
- Meet memory and rendering limitations of PS5 via manually loading, unloading, and culling geo.
- Script per-level AI behavior, interaction, goals, systems, accessibility. etc. in a **proprietary engine**.
- Work with all disciplines to address what can be hundreds of polish notes in a given month.

Gameplay Programmer for an online multiplayer action game from PlayStation's San Diego Studio.

- Built/owned various mechanics, systems and general C++/Blueprint libraries in **Unreal Engine**.
- Implemented performant multiplayer gameplay systems in an authoritative server model.
- Worked in 3D gameplay, tool creation, UI/UX, sound, data management, profiling, materials, etc.
- Pioneered "Activatables", "Waypoints", "Vendors". Revamped interaction, collectibles, weapons, Etc.

HOLYSMOKE LLC Summer 2019 to Spring 2020; //First professional experience out of college

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

- Prototyped mechanics within **Unreal Engine** as a basis for a AAA quality multiplayer game.
- Worked in animation, post-processing, net-code and created in-editor interfaces for designers.

WACKTORY Fall 2018 to Fall 2019; Grand Prize UCSC Games Showcase 2019 Design Innovation Top 3 UCSC Games Showcase 2019 Peer Choice Top 3 UCSC Games Showcase 2019

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

Programmer and Game Designer for cooperative game uniting VR and traditional play. Built in **Unity**.

- Stepped in for Lead Programmer later in project. Heavily contributed to nearly every core system.
- Built my own controller system, projectile path prediction, player FSM, editor tools, UI, VFX, etc.

ROBITS Fall 2018 to Fall 2019; Technical Innovation UCSC Games Showcase 2019 GameGo Grant 2019 Recipient UCSC Art Dean's Fund for Excellence 2019 Recipient

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

Programmer for educational game about programming robot AI for combat. Built in **Unreal Engine**.

- Developed Visual Programming Language with control flow, states, and conditionals.
- Developed modular tutorial system, modular robot parts, camera systems, fade shader, etc.

SIMULATED PLANETARY BIOSPHERE Fall 2018; 1st Place UCSC Game AI 2018 Competition

<https://github.com/ajperrot/cmsps146P7>

2 person project. PCG Goldberg Polyhedral planets of any size with evolving creature AI.

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