

Alyssa Barrientos

aly3barr@gmail.com | linkedin.com/in/alybarr | github.com/AlyBarr | linktr.ee/AlyArtBar | alybarr.github.io/Website/

EDUCATION

California State University, Fullerton

Bachelor of Science in Computer Science

Ohlone Community College

Associate in Computer Science, Associate in Art Studio, Certification in Animation and Digital Art

SUMMARY

Creative technologist building interactive systems at the intersection of graphics, code, and experience design. I develop real-time visual environments, XR prototypes, and AI-assisted interfaces that explore how software can behave expressively. I'm especially interested in how systems can feel alive through motion, behavior, and interaction. My work focuses on building environments where users explore, rather than just navigate.

SKILLS

- **Creative Technology:** Interactive systems, creative coding, generative visuals, rapid prototyping
- **Graphics & Web:** OpenGL, GLSL, WebGL, Three.js, real-time rendering
- **Programming:** Python, C++, C#, JavaScript, HTML/CSS
- **Tools:** Unity, Unreal Engine, Houdini, Blender, Maya, Git/GitHub
- **Emerging Tech:** XR (AR/VR), computer vision (MediaPipe), AI-assisted workflows

TECHNICAL PROJECTS

AI-Driven Interact System (JavaScript / Generative States) alybarr.github.io/Website/Shifting-interface-docs.html

- Built an interactive environment where AI-generated state data drives motion, layout, and interaction behavior
- Translated system attributes (tension, drift, density) into visual and responsive changes across the interface

Interactive Portfolio (WebGL / Three.js) alybarr.github.io/Website

- Built immersive interactive environments using WebGL, shaders, and procedural motion systems
- Designed responsive UI systems that shift based on user interaction and system "state"
- Explored expressive system behavior (motion, distortion, timing) as a design language

Augmented Object Intelligence (XR / Unity / MediaPipe) alybarr.github.io/Website/aoi-xr.html

- Developed interactive XR system for real-time object detection and gesture-based interaction
- Built modular tools for spatial interaction, data capture, and visual feedback
- Iterated on interaction design to improve usability and immersion

Real-Time Renderer/OpenGL Graphics Engine (C++/OpenGL/GLSL) alybarr.github.io/Website/pipeline-tools.html

- Built a C++ OpenGL renderer with custom shaders, skeletal rigging, and real-time cloth simulation.
- Implemented GPU pipeline fundamentals using VAO/VBO/EBO, GLSL shaders, and GLM transforms.

EXPERIENCE

Information Technology Intern - Pipeline & Automation

May 2025 - Aug 2025

Lucasfilm Ltd. LLC

- Built internal tool using JavaScript + REST APIs to automate workflow for 30+ engineers
- Reduced manual coordination and improved system reliability across production teams
- Authored documentation and supported rollout of production-facing tools

Virtual Production Intern - Creative Technology

June 2024 - Aug 2024

Saatchi & Saatchi - Virtual Garage Team

- Developed Python tools to automate CG asset tracking and improve workflow efficiency (~60%)
- Supported real-time visualization pipelines using Unreal and production asset systems
- Collaborated across creative + technical teams to support prototype development

LEADERSHIP

Club Chair, ECSICC Rep, Event Coordinator - ACM Siggraph (Cal State Fullerton)

May 2024 - Jan 2026

- Lead events, workshops, and industry collaborations focused on graphics and interactive media

Interactive Marketing Specialist & AICC Representative - Women In Animation (CSUF)

May 2024 - Jan 2026

- Support initiatives connecting technology, storytelling, and creative communities

STEM Advantage Scholar & Girls Who Code Member

Aug 2024 - Present