

# Riker Sandvik

408-823-2103

rsandvik@gmail.com

## TECHNOLOGIES

Tools: Maya, Blender, ZBrush, Photoshop, Substance Painter, FilterForge, Visual Studio, Perforce, Git

Dev: C#, JavaScript, Python, Unity, .Net, Monogame, Phaser, GLSL/HLSL, CSS, WebGL

Misc: Adobe Premiere, Final Cut Pro X, Reason, Logic Pro X, VR

## EDUCATION

Cogswell Polytechnical College (Aug 2018)

San Jose, CA

BA Digital Art Animation

Concentration in 3D Modeling and Texture work

## RECENT PROJECTS

GitHub: [github.com/rlsan](https://github.com/rlsan)

### **2D Game Engine** (2017–present)

- Developed a game engine using C# and the Monogame framework.
- Designed a GUI system for drawing interactive windows with nested elements.
- Created an editor that supports serializing/deserializing to XML.
- Designed a hierarchical tile-drawing system for smart placement of tiles.
- Implemented basic physics – velocity, collision, gravity, etc.
- Developed quadtree (hierarchical tree of screen-quadrants) for optimized collision detection.
- Produced a detailed design document.

### **College Community Project “Project Miles”** (2018-2019)

- Modeled and textured props for cemeteries and plants.
- Created texture maps in Substance Painter.

### **72-Hour Global Game Jam** (2013–2017)

- Worked in a team and has led a team to develop games in Unity.
- Designed a 2D procedural ground mesh generation system for levels.
- Solved a geometry problem involving reflecting vectors off the interior edge of a circle.
- Prototyped concepts by using Javascript libraries in the browser.
- Created 3D and 2D assets for characters and backgrounds.
- Created music and sound effects.

### **Unity** (2010–present)

- Wrote CG shaders for effects such as dusty surfaces, electricity, faked refraction, and full-screen effects.
- Created a world for VRChat using a Blender-to-Unity workflow.
- Created and rigged character models for VRChat.
- Prototyped many game ideas usually involving physics and simulation.