

Jeffrey Johnson

Skills and Knowledge

Languages

- *Expert:* C#, Java, Golang
- *Experience:* GLSL, C/C++, Typescript, Objective-C, Python, Bash

Software: Unity, OpenGL, Blender, PICO-8, Git, Unix, Webpack, Protocol Buffers, Photoshop

Knowledge: Game programming, 3D math, data structures and algorithms, distributed systems, graphics pipeline, testing, concurrency, basic 3D modeling, AWS

Experience

Founder at Orchid House Productions

3/2021 - Present

Shipped three games as a solo developer. See [portfolio](#) for screenshots and more information.

Runner Ralf: 3D autorunner built with Unity. Modeling and animation done in Blender.

- Designed and built responsive and tactile player controls. Includes horizontal dashing, late jumping, and jump buffering.
- Built custom third-person camera tracking for a loose feel and to avoid jarring pans.
- Built various enemy behaviors, such as deterministic movement for predictable replay.
- Wrote shaders for a distance-based fade effect, to add a visually appealing surprise-factor.

Little Witch: 2D platformer written for PICO-8.

- Wrote systems for platformer physics, collision detection, and particle effects from scratch.
- Utilized state machine pattern to cleanly implement player and enemy behaviors.
- Implemented performant fizzle fade algorithm for level transitions, as seen in Wolfenstein 3D.

Bridge Mobs: 2.5d puzzler written for PICO-8.

- Implemented various puzzle mechanics such as switches, gates, and keys, as well as enemies synchronized with the player such that the correct movements must be made to avoid them.

Senior Software Engineer at Snapchat

6/2016 - 1/2021

Snap Map: product for location sharing and map-based content consumption, used by millions daily.

- Designed and built OpenGL render layer for map assets.
 - GLSL shaders for rendering generic sprites and various map marker shapes.
 - Collision detection for displaying and hiding map assets as the user navigates the map.
- Designed and built algorithm for real-time map data publishing backend.
- Collaborated with the design team on rapid prototyping to make quick design decisions.

Snap Pro Lead Engineer: tools for creators and publishers to connect with and grow their fan base.

- Designed and built web services and iOS components used daily by millions of users.
- Led sprint planning, product and engineering design reviews, issue triaging, and mentoring.

Software Engineer Level II at Amazon Glacier

8/2013 - 6/2015

Software Engineer at Amazon Digital Ordering

12/2010 to 8/2013

GDC Conference Associate

3/2022

BS with Honors in CS at University of Washington (GPA 3.93)

6/2010