

NATE PARK

Software Engineer



gamedevnate@gmail.com
<https://nate.rocks>

EXPERIENCE

Vectorworks - Imaging/Graphics Engineer

Irvine, CA (Remote)

Research and Development Team

2024 - 2026

- Developed algorithms for processing, interacting with, and visualizing 3D objects in a CAD/BIM application
- Redesigned the multi-view pane layout system for 3D scene visualization, supporting direct manipulation of splitters and junction vertices across arbitrary configurations

Meta - Engine Programmer

Irvine, CA (Remote)

Ready at Dawn Studios, Graphics Team

2022 - 2023

- Streamlined the reflection probe system with the implementation of compute shaders and file I/O reduction, cutting bake times several seconds
- Presented the Image-Based Lighting solution of the Ready at Dawn Engine to the team, exploring how light transport equations, importance sampling, simplifying assumptions, and shader code produce pixel values on screen
- Diagnosed light leaking artifacts in irradiance volumes and added unit tests for the diffuse and specular light baking

Sony - Game Programmer

Santa Monica, CA (Hybrid)

Naughty Dog, LLC., Accessibility Team

2019 - 2021

- Created the control customization menu and managed the core input system, including custom schemes and alternate controller orientations
- Designed an input group stack to mirror player state, ensuring remapped actions in higher states are prioritized over actions in lower states that share the same button
- Developed a UI Editor feature allowing images to reference player actions instead of fixed image paths, supporting remapped actions through dynamic image lookup

Microsoft - Software Engineer II

Redmond, WA

Turn 10 Studios, Tools Team

2018 - 2019

- Added support for real-time synchronization between the game and game editor for lights and static geometry, providing status updates and error messages to users

Activision - Game Programmer

Foster City, CA

Sledgehammer Games, Cooperative Multiplayer Team

2016 - 2018

- Implemented enemy behaviors, weapon-variant and attachment systems, and debug tools for cooperative multiplayer

Activision - Engineering Intern

Santa Monica, CA

Treyarch Studios, Graphics Team

2014

EDUCATION

DigiPen Institute of Technology

Redmond, WA

B.S. in Computer Science, Mathematics Minor

2011 - 2015

SKILLS

Technical

- Linear Algebra
- Skinning / Skeletal Animation
- Raytracing / Raymarching
- Qt / WPF / Dear ImGui
- TCP / UDP Networking
- 3D Rigid Body Dynamics
- Unity3D Prototyping
- A* Pathfinding
- Direct3D 11 / 12
- OpenGL 3.2

Languages

- C / C++ / C#
- HLSL / GLSL / CUDA
- Python
- Lua
- GSC (CoD)
- Racket / Scheme / Lisp
- HTML / CSS / JavaScript

Platforms

- Windows / Linux / macOS
- PlayStation
- Nintendo DS / Wii
- Xbox