Rohin Knight

Programming | Tech Art

With over a decade in games and 6 years in web/mobile app development, I have a strong track record of delivering high-quality work and solving complex challenges. Passionate about finding solutions and helping my teams succeed.

Contact

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Portfolio

rohinknight.com/portfolio

github.com/rohinnz

Education

- B.I.T, Computer Programming
- B.A, Chinese Language & Literature
- Certified Agile Leadership Essentials

Skills

Soft Skills

- Complex Problem Solving
- Excellent Written and Verbal Communication
- Mentorship and Leadership

Game Dev

- Unity (VR/AR, iOS, Android, WebGL, Steam, Plugins & Editor Tools)
- Render pipelines (URP) and shaders (Shader Graph, ShaderLab, HLSL)
- Debugging and Profiling (Frame Debugger, RenderDoc)
- Game Servers and Unit Testing
- Unreal (PCG, Tooling, Materials & Niagara)
- Configuring CICD Servers

Tech Art

- Photoshop, Maya & Blender scripting (Python, MEL, Qt) & standalone tools
- Image Editing (Seamless Textures, Normal Maps, etc)
- Some experience with 3D Modelling & Rigging

Web3

- Solidity Smart Contarcts, Hardhat & Unit tests

Experience

2023-02 - 2025-04 (restructured)

PlaySide Studios - Senior Technical Artist

PlaySide Studios is Australia's largest game developer.

I contributed to three major titles:

- Civilization VII - VR (Proprietary C++ Engine)
- Shattered, (Unity – Quest 3 Mixed Reality)
- Unannounced AAA Game (Unreal Engine)

Some of my contributions:

- Built a PCG spline tool in Unreal (Blueprint + C++) that allowed level designers to quickly place fully optimized collision walls.
- Developed a solution for cracks forming on glass, which then transitioned into shards falling out.
- Created a fake real-time lighting effect for torchlight, including a flicker effect for other light sources.
- Built multiple LUT systems with blending
- Modified a VAT shatter shader to ensure glass shards fall to the ground regardless of height while maintaining clean animation.
- Developed a Fresnel-based object highlighting effect.

(Still awaiting confirmation on what I can include for Civilization VII - VR.)

2022-03 - 2022-12 (restructured)

Myria - Senior Unity Engineer

Myria is a blockchain gaming ecosystem. I was the associate Lead Programmer on their game Moonville Farms.

Some of my contributions:

- Co-authored the technical design document and helped shape the initial architecture.
- Wrote the project's coding standards to ensure consistency across the team.
- Interviewed candidates, delegated tasks, and reviewed code from junior developers.
- Solved key technical challenges, including world map display, pathfinding optimization and water shader blending for towns.

2015-01 - 2022-03

PikPok - Lead Technical Artist / Programmer

PikPok (formerly Sidhe Interactive) is one of New Zealand's oldest and largest game studios. I worked there for seven years — starting as a programmer and later transitioning into a Tech Art role, where I led a two-person team providing tech art support across multiple projects.

Titles I contributed to: Agent Intercept, Rival Stars Horse Racing, Into the Dead 2, Breakneck, Breakneck - Gamblit Gaming, Rival Stars College Football, I Am Monster, Zombie Rescue Squad, Four Letters, and My Cat Club.

Titles I provided life ops support for: Into the Dead, Shadow Wars, Dungeon Inc, Rival Stars Basketball, Flick Kick Football Legends, Turbo Fast and Robot Unicorn Attack 2.

Some of my contributions are listed on the next page.

Experience (continued)

Unity:
- Built a UI scroll grid pooling system capable of handling thousands of items. Included an auto-layout feature with support for items spanning multiple rows and columns. This package is now used across all new projects.
- Created several animation tools, including one for copying animation events with relative or absolute time scaling.
- Developed a game environment duplication tool for Unity assets with support for materials, nested prefabs, etc.
- Built a multi-prop placement editor tool for Agent Intercept. Tool had many bells and whistles and saved level designers months of time.
- Created an editor screenshot tool that captured multiple resolutions across all supported languages.
- Built a custom iOS plugin for 3D Touch Support (prior to Unity's official solution).

Shaders:
- Built a 2D Soft Mask package with support for nested 9-slice masks. Optimised performance using shader variants and precalculated some parts outside the shader to avoid shader branching on mobile.
- Backported shadow fade to a game using an older custom URP pipeline.
- Added SpeedTree wind support to a custom shader, along with a tool for patching legacy SpeedTree assets.
- Fixed distant tunnel mesh lighting in a project without baked shadows: modified shaders to use vertex color and built a Unity/Blender tool to apply vertex color to all affected meshes.
- Integrated Unity terrain height blending into a legacy terrain shader. Packed data into the alpha channel of the albedo texture to save memory.
- Created the following shaders: water shader, skybox gradient, shield effect

Maya and Photoshop:
- Created automated Maya script distribution system so Artists always had latest tools. I also included this in my presentation at NZGDC 2021: www.youtube.com/watch?v=rg0VOf-2TW8
- Built a tool for bulk animation import, bake, playblasts, and export. Also added feature to save clip notes and search through all clips in projects and mocap library.
- Built multiple Photoshop plugins using UXP. The most complex one would export screenshots in multiple languages and ensure they were the best quality but below a target file size.

Misc:
- Built a Windows app to bulk install Unity versions with script templates and sync with Unity Hub. Tool included a self-update feature.
- Wrote npm script and pre-commit git hook for in-house Unity packages to enforce consistent namespaces and correct format for changelogs.
- Built a Pyramid web scraper to track the top 200 apps in the Play store, in every category for every country. Used Celery and Redis for handling multiple scraper tasks on a high-end Amazon server.
- Built a company floor plan web app (Flask) during a lab day. Could drag and drop people and furniture. Previously someone had to constantly update a PSD document.
- Did a lot of Live Ops work on our legacy C++ titles, fixing hard to repro bugs, upgrading ad plugins, configuring build settings, etc.

2013-08 - 2015-01 **Bank of New Zealand - Mobile App Developer**
Worked on mobile banking apps using Objective-C, C/C++, Java and Swift. bnz.co.nz.

2011-04 - 2013-08 **Harvest Your Data - Mobile App Developer**
Developed survey apps using Objective-C, C/C++ and Java. harvestyourdata.com.

2010 **Guangzhou, China - English Teacher**

2008-02 - 2010-01 **Catalyst - Website Developer**
Worked with clients to develop Drupal CMS solutions in Linux. catalyst.net.nz.

2007-10 - 2008-02 **ConSit Systems Ltd - C++ Developer**
Built Windows apps and plugins for Archicad (architectural tools).