

JOSH CARATELLI

Software Engineering Lead

I'm a hardworking, team-oriented programmer who strives to write clean, cache friendly code. I'm always eager to learn and leverage my skills to facilitate unforgettable gameplay and narrative driven experiences.

☎ (+61) 405 969 276

✉ joshcaratelli@gmail.com

🌐 joshcaratelli.com

✓ References available on request

EXPERIENCE



Gravity Well

ENGINEERING LEAD
Jul 2023 – Present

SENIOR ENGINEER
Aug 2022 – Jul 2023

★ UNANNOUNCED TITLE

PLATFORMS TBA
RELEASE DATE TBA

TECHNICAL DIRECTION

- > Lead an exceptional sub-team of engineers, assisting with career growth and technical mentorship.
- > Assist the Engineering Director with project scheduling, task triage, hiring and setting engineering best practices for the project

CORE ENGINE AND GENERALIST SYSTEM ENGINEERING

- > Creating a new AAA IP alongside a veteran team which includes the founding members of Infinity Ward and Respawn Entertainment
- > My primary areas of focus include core engine, physics and generalist systems engineering. We utilize a heavily customized version of Unreal Engine 5



Sledgehammer Games (Activision)

SENIOR SOFTWARE ENGINEER
Mar 2022 – Jul 2022

SOFTWARE ENGINEER
Jun 2017 – Mar 2022

★ CALL OF DUTY: VANGUARD

XS | PS5 | XB1 | PS4 | PC
Shipped Late 2021, C++ | LUA | Python | C# | GSC

DESTRUCTION STRIKE TEAM MEMBER

- > Part of a core engineering effort to implement fine grain destruction, a marquee feature for the title.
- > Destructible asset pipeline, rigid body optimization and improving client only clutter to assist with destructible atmosphere

PHYSICS ENGINEERING

- > Forces (radial force occlusion, weapon muzzle and bullet impact forces), ragdolls, cloth and further physics support for hierarchical "composite" model asset type I previously co-authored

CORE GAMEPLAY SYSTEMS

- > Extensive work to save a pivotal Single Player level from being cut on two occasions
- > Killcam, weapon caliber damage multipliers, weapon mounting / mantling with destruction

MISC.

- > Extensive onboarding for all disciplines and a regular point of contact for Call of Duty Engineering knowledge
- > Single Player NPC developer names tooling and implementation, employee commemoration planning and patch notes assistance

★ CALL OF DUTY: WARZONE

★ CALL OF DUTY: MODERN WARFARE

XB1 | PS4 | PC
Shipped Early 2020 / Late 2019, C++ | LUA | Python | C# | GSC
Note: I was on loan to Infinity Ward for Modern Warfare and Warzone's production

LARGE MAP TECHNOLOGY STRIKE TEAM MEMBER

- > Helped take the franchise from small player counts to support 150+ players in a large play space, from publisher technology green-light to ship
- > Automatic Proxy LOD generation asset pipeline, including Proxy LOD thermal vision support and continuous integration support
- > Spatial Grid based asset streaming, focusing on long range sniper scopes
- > Additional work on impostor cards and "Submap" workflow

CORE ENGINEERING

- > Co-authored a new hierarchical "composite" model asset type to improve art and design workflow for moving models and vehicles
- > GPU vertex cache optimization for current generation platforms

★ CALL OF DUTY: WWII

XB1 | PS4 | PC
Shipped Late 2017, C++ | LUA | Python | C# | GSC

CORE ENGINEERING

- > Joined just before E3 and provided core engineering programming support for Singleplayer, Multiplayer and Co-Op (Zombies)
- > Support for "Headquarters" social space, a marquee feature for the title



> Resolving Microsoft XR's and Sony TRC's to ensure title submission compliance

LIVE OPS

- > Moved to Live-Ops and Build Management post launch due to favorable time zones
- > Assisted with in-game updates and became the sole build engineer for 1st Party Title Updates

★ MISC. RESPONSIBILITIES

NON-TITLE SPECIFIC RESPONSIBILITIES

- > As one of eight founding members, I helped plan and heavily contributed to onboarding for the Melbourne studio expansion to 150+ developers over two years
- > Author of a Slackbot Framework which is widely used across Activision for: JIRA task creation, anniversary and promotion celebrations and hosting "Ask Leadership" sessions
- > Culture Committee Member, Fire Warden and First Aider



Big Ant Studios

JUNIOR ENGINEER
Jan 2016 – Jun 2017

★ RUGBY LEAGUE LIVE 4

XB1 | PS4 | PC
Shipped Mid 2017, C++ | LUA | Python | C#

★ DON BRADMAN CRICKET 17

XB1 | PS4 | PC
Shipped Late 2016, C++ | LUA | Python | C#

★ CASEY POWELL LACROSSE 16

XB1 | PS4 | PC
Shipped Early 2016, C++ | LUA

SYSTEM / GENERALIST ENGINEERING

- > Ownership of audio (SFX and commentary), in-game UI and meta-game (match objectives and statistics) systems programming
- > Additional tools, gameplay, physics, rendering and core system tasks
- > Resolving Microsoft XR's and Sony TRC's to ensure title submission compliance including XBOX Leaderboards



Double Mercury Entertainment

FOUNDER / PROGRAMMER
Jan 2015 – Jan 2016

★ SMOG GAME

iPhone / iPad
Shipped Late 2015, Unreal Engine 3 UnrealScript | Obj-C

PROGRAMMING, CO-DESIGN AND BUSINESS DEVELOPMENT

- > Co-design and implementation of all game mechanics, analytics and interstitial ad network integration utilizing the licensee version of Unreal Engine 3
- > Responsible for all business development related tasks as Company Director. Predominately dealt with Epic Games, Apple, PwC Australia and media outlets

EDUCATION

RMIT UNIVERSITY
2015 – 2018

BACHELOR OF COMPUTER SCIENCE | 3.4 GPA (Distinction)

Completed majority of course through an accelerated high school program and concurrently studied and worked fulltime in the games development industry. I was also regularly used for marketing materials and was the featured student on the University's course guide front cover.

SKILLS

LANGUAGES

- C / C++
- LUA
- C#
- Python
- GSC (Proprietary)

TECHNOLOGIES

- Unreal Engine 5 / 4 / 3
- Havok Physics
- InstaLOD
- FMOD Studio
- Call of Duty (Proprietary)

PM TOOLS

- JIRA
- Hansoft
- Trello

VCS

- Perforce
- Git
- Subversion

SHIPPED GAME EXPERIENCE

CORE / ENGINE

AUDIO

SYSTEMS

LIVE-OPS

PHYSICS

BUILD

ASSET PIPELINE

IN-GAME UI

MULTIPLAYER

TOOLS