

Zachary Metcalf

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Industry Experience

- Riot Games** Spr. 2021—Pres.
Manager, Software Engineering
R&D—R&D (Unreal Engine, C++)
 - Championed performance analytics, reference analysis, and debug tooling across multi-game ecosystem
 - Managed 4 engineering direct reports through career growth and feedback conversations
 - Led technical and product direction for cross-discipline maps, ai, audio, and performance pod

- Senior Software Engineer**
R&D—R&D (Unreal Engine, C++)
 - Implemented and contributed modular Slack Api plugins to multi-game ecosystem
 - Built a playtest service for rapidly patching, deploying, and managing prototype builds on AWS servers
 - Wrote a suite of C++ libraries for creating bespoke prototype tooling applications using ImGui
 - Prototyped game features including: Wwise footsteps audio, services in Go, and a Slackbot in Python

- Blizzard Entertainment** Spr. 2019—Spr. 2021
Software Engineer
Overwatch—Colorful team-based hero shooter with exhilarating competitive 6v6 combat (C++)
 - <http://www.playoverwatch.com>
 - Produced, designed, and implemented features for the Workshop, a custom game scripting system
 - Developed a framework for creating and extending synchronized debug widgets using ImGui
 - Optimized asset package loading to support intelligent preloading and accommodate rapid hero swaps

- Rockstar San Diego** Sum. 2015—Fall 2018
Engine Programmer
Red Dead Redemption 2—Vast and atmospheric open-world tale of America's unforgiving heartlands (C++)
 - <http://www.rockstargames.com/reddeadredemption2/>
 - Developed population system to manage streaming, memory, and design requirements of the world
 - Integrated proprietary bug tracking system for automated error detection and bug generation by QA
 - Added debug tooling to visualize and auto-document game data for streaming, memory, and ped systems

- USC Advanced Games Project** Spr. 2014—Sum. 2015
Software Engineer
Polyseum—Multiplayer, team-oriented first-person shooter (Unreal Engine, C++)
 - <http://www.polyseum.com>
 - Setup core game framework and mentored for networked gameplay, movement, and weapons
 - Implemented client-side prediction, optimized data replication and RPCs for dedicated servers
 - Setup Jenkins CI build configuration for deploying cross-platform builds to perforce

Academic & Teaching Experience

- USC Department of Information Technology Program** Fall 2022—Spr. 2023
Adjunct Lecturer
ITP 435—Professional C++
 - Applications of advanced concepts in C++ including lambda expressions, templates, secure coding, parallel programming, writing performant code, CMake and continuous integration

University of Southern California

- M.S. in Computer Science** Sum. 2015
B.S. in Electrical Engineering Spr. 2015
B.S. in Business Administration Fall 2014