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, triage workflows, 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