

Andrew M Kane

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SKILLS

Platforms

Android, AWS, Google Cloud, iOS, Linux, Mac, PlayStation 4, PlayStation 5, Stadia, Steam, Windows, XBOX One, XBOX Series X & S

Languages

C++, C#, Java, JavaScript, LUA, PHP, Python, SQL

Tools & Applications

CMake, Git, MySQL, Node.js, Oracle, Perforce, PostgreSQL, Premake, Redis, REST, SVN, Unity3D, Unreal Engine 4, Visual Studio

Interpersonal

Excellent communication skills across all business levels, onboarded internal & external engineers, collaborated with global teams & co-developers, led a team of engineers

EDUCATION

Master's Degree Information Technology

Rochester Institute of Technology, 2010

Bachelor's Degree Information Technology

Rochester Institute of Technology, 2008

Profile

10+ year experienced backend, server, game, API, and database developer with experience in startup, mid-size, and AAA studios seeking to direct and lead innovative and interesting projects with diverse and talented teams.

Games

- Criminal Empire
- Diablo III: Reaper of Souls
- Ghost Recon Commander
- Harry Potter: Hogwarts Mystery
- Hearthstone
- Heroes of the Storm
- League of Legends
- Marvel's Avengers
- Overwatch
- Pettington Park
- Slots
- StarCraft: Remastered
- StarCraft II: Legacy of the Void
- Tank Nation
- World of Warcraft: Legion
- World of Warcraft: Warlords of Draenor
- Unannounced NCsoft mobile title
- Canceled JamCity mobile title ("Wielders")

Experience

Senior Online Services Engineer at Crystal Dynamics

Redwood City, CA | June 2018 - Present

- Lead online services for Marvel's Avengers on a 25+-year-old C++ engine.
- Managed Marvel's Avengers's Java backend server to provide a suite of features covering PlayStation 4, PlayStation 5, Stadia, Steam, XBOX One, and XBOX Series X & S platforms.
- Created & integrated games-as-a-service features such as purchasing, account management, inventory, transactions, and cheat-prevention.
- Onboarded & managed multiple contractors and full-time engineers on both client-side & backend tracks.
- Created technical design documents and delegated them to other engineers.
- Optimized several server-side features by 1500%.
- Optimized client-side metrics creation by 500%.
- Collaborated with partners & co-developers across 6 timezones.
- Supported the worldwide launch of Marvel's Avengers Beta across 3 platforms with 6+ million unique users becoming PlayStation's most-downloaded beta in history.
- Supported the worldwide launch of Marvel's Avengers across 4 platforms.

Lead Software Engineer at Jam City

San Francisco, CA | August 2017 - May 2018

- Built a shared C# backend & client-side C# codebase for a mobile, real-time battle arena game in Unity 3D and .NET Core.
- Designed and propagated unit test, game logic, and UI workflows.
- Developed a C# reflection-based rewind system for lag-managed real-time battle simulations.
- Partnered with cross-studio core technology teams and contributed critical core library improvements & fixes.

Senior Server Engineer at NCSoft

San Mateo, CA | March 2016 - August 2017

- Designed a cloud-agnostic, Docker-based REST game service API architecture and deployed it to AWS.
- Established a core technology team to create centralized C# online game services.
- Implemented online game service features on multiple Unity 3D C# game clients.
- Created technical design documents for game features and core service APIs.
- Set up unit and integration test processes for all API functionality.
- Optimized TCP socketed services to reduce bandwidth usage by over 85% and increase user capacity by 4000%.

Software Engineer at Blizzard Entertainment (Battle.net Team)

San Francisco, CA | January 2014 - March 2016

- Developed C++ libraries used across all Blizzard teams & games.
- Contributed to a company-wide fork of the C++ and LUA Premake project that provided cross-platform C++ libraries with minimal configuration and deterministic compilation.
- Collaborated with technical writers to establish a styled Doxygen documentation flow for all of Battle.net.
- Built shared C++ libraries for telemetry data, WebSocket connections, inter-process communication, and payment systems. Provided support to game teams during integration and adjusted libraries per team feedback.
- Integrated features and bug fixes to the core Battle.net game services which are used by over 46 million users.
- Created an off-screen, shared graphics memory rendering system using the Chromium Embedded Framework (CEF) and integrated it into *World of Warcraft* and additional game prototypes.

Lead Server Engineer at Wormhole Games

San Francisco, CA | September 2013 - December 2013

- Collaborated with leadership to create a Python and MySQL REST API service for the iOS game *Tank Nation*.
- Established a Puppet-based deployment system for AWS.

Lead Server Engineer at Midverse Studios

San Francisco, CA | March 2013 - October 2013

- Created analytical and gameplay logic REST API systems using PHP and Zend framework.
- Integrated API and additional features into *Bingo* (iOS, Android) and *Slots* (iOS, Android).
- Improved MYSQL indexing and data structures and added new gameplay modes to *Arms Cartel* (iOS).
- Advised leadership on technology choices and cost reductions while designing new mobile titles.

Senior Software Engineer at PlayPhone

San Francisco, CA | November 2012 - February 2013

- Created a web interface for users to create triggers that specified analytical and A/B testing events.
- Optimized MySQL queries to improve application performance.
- Built a payment verification system with vendor APIs, backed by a MySQL cluster.
- Created Unity 3D integration for PlayPhone's proprietary mobile SDK and payment APIs.

Server Engineer at LootDrop

San Francisco, CA | September 2011 - October 2012

- Developed game features in a REST API on a LAMP stack using MySQL and PHP.
- Integrated Facebook, Google+, and DemonWare APIs.
- Launched web games *Ghost Recon Commander* (Facebook, Ubisoft) and *Pettington Park* (Google+, Zynga).
- Collaborated with publishers to prioritize game features and assess game milestone goals.

Associate Software Engineer at Riot Games

Culver City, CA / Santa Monica, CA | September 2010 - July 2011

- Integrated bug fixes and features into the PVP.net platform service, which powers *League of Legends* (Windows, Mac).
- Created MySQL scripts to denormalize player data into JSON entries, increasing data read & write speeds.
- Lead establishment of the Build Team, which provided continuous integration builds via an Ant & Maven build system and Jenkins build pipeline.

PROJECTS

- Contributed to Open Source Projects:
 - eAthena: C and MySQL Ragnarok Online server emulator.
 - Premake: C++ and LUA project file generator.
 - lib-lifx: C++14 library for controlling LIFX light bulbs, including a command-line tool.
 - psn-node: node.js JavaScript library for polling the PlayStation Network for user information.
 - MegamanAI: Python program that uses genetic algorithms to play the first level of Megaman X.
 - Petnet-api-hacking: Reverse-engineering of the Petnet.io internet-of-things pet feeder.
- Built & maintained an online MMORPG gray-shard game server (qrRO) for 8+ years. Managed server uptime, community engagement, bug fixes, upgrades, and database optimization. Hex-edited game binaries to add custom items to a multilingual game.
- Enforcer for Penny Arcade Expo (PAX). Duties include PC tournament management, security, and liaison amongst departments.
- Created a web-based voting system for the Game Audio Network Guild (GANG) to select yearly award winners.
- Mentored a team of 5 students at Arizona State University for their capstone team game project by scheduling weekly meetings, collaborating on feature prioritization, and teaching students version control.
- Achieved the rank of “Eagle Scout” in the Boy Scouts of America

INTERESTS

- Baking
- Bread-making
- Computer Hardware
- Dungeons & Dragons
- Food & Restaurants
- Home Automation
- Magic: The Gathering
- Mechanical Keyboards
- Traveling
- Vinyl records