

Andrew M. Kane

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Experienced software developer with 5+ years of professional game development roles in startup and AAA studios currently seeking new opportunities. Expert in C, C++, C#, PHP, Premake, SQL, and Unity Script. Advanced knowledge in Git, Java, JavaScript, Linux, LUA, Mac, node.js, MySQL, Oracle, Python, Redis, SVN, Unity 3D, Visual Studio, Windows. Experience with Android, iOS, PlayStation 4, and Xbox One.

Work Experience

Software Engineer at Blizzard Entertainment, Inc., January 2014 – Present, San Francisco, CA

Develop C++ libraries utilized in Blizzard games, including *Hearthstone* (Windows, Mac, iOS, Android), *Diablo III: Reaper of Souls* (Windows, Mac), *World of Warcraft: Warlords of Draenor* (Windows, Mac), *Heroes of the Storm* (Windows, Mac), *StarCraft II: Legacy of the Void* (Windows, Mac), *Overwatch* (Windows, PS4, Xbox One), and *World of Warcraft: Legion* (Windows, Mac). Contributed to a company-wide C++ and LUA Premake fork that ensured C++ libraries were able to function cross-platform with minimal configuration, to provide deterministic compilation, and provided game development teams a wide array of features that were usable regardless of platform.

Establish a Doxygen documentation flow and package/distribution system for C++ binaries and libraries by creating a suite of Python scripts to facilitate the generation, compilation, packaging, and uploading of compiled assets. Build shared C++ libraries for telemetry data, websocket connections, inter-process communication, and payment systems for game teams to utilize as dependable components to increase development speed and reliability. Built and integrated the Chromium Embedded Framework (CEF) into a proprietary application to drive a headless browser and provide off-screen rendering into shared graphical memory.

Implement test-driven development (TDD) and the agile development method, decreasing bugs, increasing the speed of our team's development and debugging tasks, and increased visibility into tasks being completed. Prototype an experimental audio-based authentication system for Battle.net and a sample Unity 3D mobile game with RPC networking as part of department hack-a-thons.

Added subsystems and bug fixes to the core Battle.net game service to provide improved services to game teams and 12 million users.

Lead Server Engineer at Wormhole Games, September 2013 – December 2013, San Francisco, CA

Integrated the Werkzeug framework and MySQLdb driver in a Python and MySQL REST API to provide game logic and internal administrative tools on *Tank Nation* (iOS). Established a Puppet-based deployment system for the Python API on AWS with auto-scaling groups to facilitate scaling of EC2 instances to maintain uptime and dynamically manage user connections.

Lead Server Engineer at Midverse Studios, March 2013 – October 2013, San Francisco, CA

Lead developer on analytical API and developer system using PHP and Zend framework to provide developers analytical data and shared daily achievements. Added features to Midverse's PHP REST game API for *Bingo* (iOS, Android) and *Slots* (iOS, Android) to provide new content, modes, and features. Maintained MySQL data structures and created new gameplay modes on *Arms Cartel* (iOS) to increase daily users, and advised leadership on modern mobile technologies for developing new mobile titles.

Senior Software Engineer at PlayPhone, November 2012 – February 2013, San Francisco, CA

Built a web interface for users to specify triggers that would provide analytics and A/B testing events within their mobile games and would be synced to MySQL and Redis clusters. Diagnosed and optimized slow queries and designed new tables for dynamic data-driven trigger UIs by creating specialized SQL statements to improve application speed. Built payment verification systems with a vendor's API and PlayPhone's MySQL cluster to remove refunded or canceled in-app-purchases. Constructed a Unity 3D Editor integration with PlayPhone's proprietary mobile SDK to provide easier Unity 3D integration and increase developer usage.

Server Engineer, Loot Drop at September 2011 – October 2012, San Bruno, CA

Developed game features, such as timed quests and item interactions, with Facebook and Google+ APIs in a PHP and MySQL REST service on a LAMP stack for a multi-game backend service for *Ghost Recon Commander* (Facebook, Ubisoft), and *Pettington Park* (Google+, Zynga). Restructured, tuned, optimized, and maintained a MySQL and Memcached system for the REST API. Worked closely with external publishers to select game features and assess game milestones. Created MySQL queries for analytical data to provide accurate reports to publishers.

Associate Software Engineer at Riot Games, September 2010 – July 2011, Santa Monica, CA

Completed routine bug fixes and new asset adjustments for high-traffic Java platform service (PvP.net) that powered the online MOBA game *League of Legends* (Windows, Mac). Drafted MySQL scripts for stored procedures and JSON migration to increase the speed of reading over 1 million user entries from Riot's Java platform. Managed Ant & Maven-based build scripts in a Jenkins environment to provide continuous integration to the entire Platform Engineering team which lead to increased visibility of faulty code commits. Researched NoSQL solutions for feature developments by evaluating multiple technologies and providing management with a per-feature review.

Education

Rochester Institute of Technology

Masters Degree in Information Technology, May 2010

Concentrations in Database Administration and Game Design & Development

Studied securing, tuning, and warehousing database systems in MySQL & Oracle on CentOS Linux installations. In collaboration with 11 students, developed a game world and prototype in XNA. Partnered with a local newspaper, The Democrat and Chronicle, to create a community-wide alternate reality game (ARG) titled "Picture The Impossible" using PHP, Drupal, and MySQL that acquired 2,500 players.

Composed and presented a year-long Master's Degree Capstone project to advising professors. The Capstone consisted of an 80-page written work titled "Virtual World Interoperability of Avatar Information" that chronicles attempted player suggestions and avatar transference. Completed a prototype that allowed avatar transference and recommendations to players in support of my thesis.

Rochester Institute of Technology

Bachelor Degree in Information Technology, May 2008

Concentrations in Database Administration and Game Design & Development

Studied 2D and 3D game programming, leading to the creation of 2D and 3D game prototypes for PC and Xbox360. Mastered and developed applications in a three-tier architecture for MySQL DBMS by creating an online store system in PHP. Managed Oracle installation on CentOS Linux by performing backups, recovery, disaster recovery, and creation of PL/SQL scripts.

Misc.

- Contributed to Open Source Projects:
 - eAthena: a C and MySQL Ragnarok Online server emulator.
 - Premake: a C++ and LUA project file generator.
 - lib-lifx: a C++14 library for controlling LIFX lightbulbs, including a command-line tool.
 - psn-node: a node.js library for polling the PlayStation Network for user information.
- Built and maintained an online MMORPG game server (qrRO) for over 8 years. Single-handedly managed server uptime, community engagement, and general upkeep.
- Active Enforcer for the Penny Arcade Expo. Duties include PC tournament management, security check, and liaison amongst volunteers.
- Created a web-based voting system for the Game Audio Network Guild (GANG) to select the winners of their yearly awards.
- Mentored a team of 5 students at Arizona State University on their capstone team project by meeting weekly, specifying features, and teaching version control usage.
- Achieved the rank of "Eagle Scout" in the Boy Scouts of America.