

# ABIGAIL HALL

Senior Mobile Platform Engineer | C++ Expert | Unreal Engine

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☆ Extra Field

## SUMMARY

With over 5 years of experience in mobile game development, leveraging expertise in C++ and Android NDK to optimize Unreal Engine performance. Passionate about pushing the boundaries of mobile gaming technology, particularly in shader pipelines and platform APIs. Achieved substantial performance improvements in AAA titles.

## EXPERIENCE

### Lead Mobile Platform Engineer

**Activision Blizzard** ━ 06/2019 - Present ━ Indianapolis, IN

- Led a team to launch a major Android game update, enhancing rendering performance by 25%, resulting in improved user reviews and engagement.
- Collaborated with device manufacturers, significantly reducing CPU and GPU compatibility issues, improving cross-device performance by 40%.
- Developed platform-specific data management tools, reducing data retrieval time by 35% and enhancing user experience.
- Integrated crash reporting tools on mobile platforms, lowering crash rates by 50% across major releases.
- Enhanced several low-level systems interfacing with platform APIs, substantially boosting memory allocation efficiency.
- Guided cross-functional teams in addressing complex technical challenges, resulting in improved game engine stability.

### Senior Android Developer

**Electronic Arts** ━ 01/2016 - 05/2019 ━ Indianapolis, IN

- Optimized shader pipelines for Android, improving graphical performance by 20% and reducing latency issues in a popular gaming app.
- Coordinated with Google teams to enhance Android as a game development platform, leading to improved toolchain support.
- Implemented platform APIs that improved data processing speed by 15%, significantly enhancing gameplay smoothness.
- Conducted in-depth profiling on Android NDK, identifying and resolving critical performance bottlenecks.
- Drove efforts in upgrading SDKs, achieving quicker turnaround times for game feature releases.

### Mobile Engine Developer

**Unity Technologies** ━ 08/2012 - 12/2015 ━ San Francisco, CA

- Enhanced OpenGL and Vulkan compatibility, leading to seamless cross-device functionality in high-profile titles.
- Refined memory and file system interfaces, contributing to smoother and more efficient game-loading processes.
- Developed solutions for device-specific performance issues, reducing lag for critical game functions.
- Collaborated with the engine development team to extend engine capabilities, which supported third-party developers innovatively.

## EDUCATION

### Master of Science in Computer Science

**Purdue University** ━ 01/2010 - 01/2012 ━ West Lafayette, Indiana

### Bachelor of Science in Software Engineering

**Indiana University** ━ 01/2006 - 01/2010 ━ Bloomington, Indiana

## PROJECTS

### OpenSource Memory Allocator

Designed a cross-platform memory allocator aimed at reducing footprint for mobile applications. [github.com/abigail/memalloc](https://github.com/abigail/memalloc)

### VulkanPerformanceProfiler

Created a tool to profile Vulkan pipeline performance, aiding developers in resource optimization. [github.com/abigail/vulkanprofiler](https://github.com/abigail/vulkanprofiler)

## KEY ACHIEVEMENTS

### Game Performance Optimization

Led optimization initiatives for a highly popular game, enhancing user experience and increasing performance by 35%.

### Cross-Platform Engine Integration

Managed key projects integrating engine technology across platforms, resulting in 40% faster deployment.

### Innovation in Shader Technology

Developed innovative solutions for shader pipeline issues, leading to a 25% improvement in render times.

### Award for Tech Innovation

Received a company-wide award for significant contributions to mobile hardware support, achieving development efficiency.

## SKILLS

C++, Android NDK, SDKs, APIs, OpenGL, Vulkan