Chase Ruppert

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EDUCATION

M.S., Interactive Entertainment • 3.6 GPA 2008
Florida Interactive Entertainment Academy (FIEA) at the University of Central Florida

B.S., Computer Science • 3.6 GPA 2007
University of Central Florida - President's Honor Roll, Dean's List

LANGUAGES, SDKs, SOFTWARE

Languages: C/C++, C#, GLSL, Python, Assembly, XML, HTML/CSS, ActionScript, JS, SQL/HIVE
SDKs: PS4, XBone, XBOX, OpenGL, Unity, Unreal/UDK, Gamebryo, OSG, Delta3D, Panda3D, Qt
Software: Visual Studio, P4/git/SVN, gcc/gdb, LLVM/LLDB, XCode

WORK EXPERIENCE

Electronic Arts 2011 - Present
Software Engineer *Redwood City, CA*

- Serves as primary contact for supporting and maintaining Origin client user login and authentication, which is used by millions of gamers daily.
- Provides game team support for key AAA game titles, such as Battlefield: Hardline, FIFA, Battlefield 4, Titanfall, and many others.
- Worked with PS4/Xbox One beta console hardware by porting C++ telemetry reporting API from PC and changed the API to allow asynchronous metrics collection of SDK usage.
- Resolved over 60% of Origin's crashes and 50% of login issues by analyzing crash reports, working with domain experts and investigating telemetry.
- Authored several tech briefs for medium-sized Origin features, documenting key architecture and implementation choices, alternative solutions, possible risks and mitigation strategies.

Electronic Arts, New IP 2013
Gameplay Engineer (Unity) *Redwood City, CA*

- Collaborated with a team of about 30 engineers, game designers, and artists to create a prototype of a multi-player FPS arena shooter in Unity using C#.
- Developed power-ups system that provided an abstract interface for the base player class to initialize, start, update, and end a power-up.
- Created a cloaking power-up that used a refraction shader (in GLSL) to alter the player's appearance.
- Wrote a normal-mapped shader in GLSL that incorporated a Blinn-Phong lighting model for character rendering and supported dynamic team color mapping.

Lockheed Martin 2008 - 2011
Rendering Engineer *Orlando, FL*

- Contributed to the success of three separate graphics and game engines written in C++, shipping several training products domestically and internationally within budget and on time.
- Played key role in performance, content pipeline, and runtime streaming technologies to allow real-time rendering of extremely large (up to 300 km x 300 km) detailed worlds rendered in OpenGL.
- Created content pipeline that supported GPU instancing, ground texture blending, and paging.
- Wrote memory allocator that tracked leaks and detected buffer overruns and memory corruption.

Zephyr: Tides of War 2007 - 2008
Gameplay Engineer *Orlando, FL*

· Developed voice-activated game in C++ with a team of five programmers, five artists, and six producers.
· Implemented a XML-driven mission system that allowed spawning, timed events and volumetric triggers.
· Implemented dynamic shadow system and worked alongside artists to integrate model animations.

Morphin' Marvin 2007 - 2008
Lead Engineer *Orlando, FL*

· Developed Morphin' Marvin, an award-winning, revenue-generating 2D Flash game for Shockwave.com, using ActionScript 3.0, during personal time.

UCF Computer Vision Lab 2007 - 2008
Research Assistant *Orlando, FL*

· Detected and tracked objects via video surveillance using a fixed-point digital signal processor (DSP) and C.

United Space Alliance (USA) 2005 - 2006
Computer Science CO-OP *Houston, TX*

· Verified and tested reusable C++ components for Space Shuttle Flight Software Application Tools.
· Automated transfer of NASA Space Shuttle mission-critical data and supporting data from database sources.

Cert-O Interactive & Biometrics DSI 2004
Lead Programmer CO-OP *Orlando, FL*

· Developed +15,000 source lines of C++ .NET code for a biometrics (finger-scanning) managerial application.
· Transitioned a new programmer into the biometrics project and authored a user's guide for the application.

ACADEMIC EXPERIENCE

Xbox XDK/Console Development

· Created a cross-platform, 3D text-rendering, networked, XML-driven game engine in C++, which builds and runs for Xbox, OpenGL and DirectX (completed in six, 40-hour weeks).
· Developed an OpenGL PC game in C++ and ported it to Xbox.
· Integrated a memory allocator and eliminated over 700 memory leaks in 22 hours.

Computer Graphics

· Applied Blinn-Phong shading, cube-mapping, projective shadows and reflections, and ray-tracing.

Multi-threading & Networking

· Implemented UDP 3-way handshake in C++ game engine.
· Developed multi-threaded TCP/IP client and server applications in C#.

PERSONAL PROJECTS

Custom Game Engine (C++)
Engine Programmer

· Continues development of self-created, cross-platform XML-driven game engine that supports XBOX, PC (OpenGL/DirectX), and Mac platforms.
· Supports basic UDP networking and physics (collision detection and reactions).