

ROMAN TIMURSON

(775) 750-9049

rtimurson@msn.com

SUMMARY

A highly accomplished and results-oriented software engineer specializing in game programming and design, with extensive experience in 3D graphics, physics, third-party engine integration, algorithms, rendering pipeline optimization, object-oriented analysis/design, and C/C++ development. An analytical thinker who consistently resolves elusive system issues and defects. A strong communicator performer who conveys challenging concepts to team members and collaborates across functions to maximize productivity and product quality.

TECHNICAL SKILLS

Programming: C/C++/C#, Python, Objective C, Java, Java Script, HTML5, WebGL, Lua

APIs and Libraries: OpenGL 4.5/ES, GLSL/HLSL/Cg, DirectX, Bullet Physics Engine, Torque and Unity3D (experience with building and modifying Unity's source code)

Math: Linear Algebra (Vector/Matrix Math), Calculus

Graphics: Real-time Shadows, Lighting, Post-processing camera effects, Particle Engine

Physics: Rigid Body Dynamics, Collision Detection and Response

Software: MS Visual Studio, Xcode, Git/GitHub, Perforce/CVS/SVN

EXPERIENCE

INTERNATIONAL GAME TECHNOLOGY, Reno, Nevada

Firmware Engineer IV, 2007-2019

- Worked as primary engineer on five full production slot games utilizing Unity3D game engine.
 - Developed numerous features for company's Advanced Video Platform (AVP), such as graphics engine enhancements, support for third-party engines, optimizations, and troubleshooting.
 - Added support for movie textures in Unity's sprite renderer and exposed various profiler metrics for custom runtime diagnostics tool.
 - Implemented real-time shadows system for rendering with 3D content in company's main graphics engine.
 - Added support for Torque Game Engine and WebKit on QNX and Windows platforms.
 - Implemented AVP's native particle engine.
 - Established OpenGL shader framework currently used to perform color space conversion of textures and movies.
 - Provided game engineers with ability to create custom shaders/effects and fully configure via Lua script.
 - Enhanced company's in-house graphics engine by adding render to texture support.
 - Researched and implemented post-processing effects (depth of field, screen-space ambient occlusion, blurring, and anti-aliasing) used in several games.
 - Improved movie playback performance in games by optimizing texture conversion in renderer.
 - Held training classes for team members on topics such as computer graphics, 3D mathematics, and new system developments.
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ADDITIONAL EXPERIENCE

ROMAN GAMES, Reno, Nevada, **Founder, Lead Developer**, 2009-2019. Specialized in development of fun and educational games for Apple's iPhone/iPod/iPad devices.

ARKITEK STUDIOS, Seattle, Washington, **Game Programming Internship**, 2006. Worked part-time with several other interns on 3D educational board game Busted, using Torque 3D Game Engine.

EDUCATION

DIGIPEN INSTITUTE OF TECHNOLOGY, Redmond, Washington

B.Sc., Real Time Interactive Simulation (Computer Science), minor in Mathematics and Physics, 2007

HONORS AND AWARDS

National Scholar, The Horatio Alger Association of Distinguished Americans

Distinguished Honor Graduate, United State Army Military Intelligence Battalion

LANGUAGE SKILLS

Bilingual in Russian and English