Guthrie B. Adams III

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Summary

Skilled, passionate, software developer with over 17 years of professional experience developing console, mobile, and PC video games, systems, tools, and related software. Seeking full-time, senior or lead programming position in game development, or related field, where I can share my expertise, while continuing to learn and contribute while tackling challenging problems and contributing the quality products.

Experience

4/2015-Present Maximum Play, Inc. (Sr. Runtime & Gameplay Systems Engineer)

- Developed extensible, hierarchical, data-driven object/component system based around the entity/component model and the component, composite, and factory design patterns
- Developed reflection system, allowing objects, components, and other classes to bind attributes that expose members, methods, and other functions for data driving and inspection
- Developed resources and serialization code for objects and components that inherently supports prefabs
- Developed several concrete components that wrap, interact with, and expose gameplay, graphics, and other engine features for game development and use in tools
- Developed MaxCore performance, flocking demo that utilizes custom components, steering behaviors, and a spatial hash, driven by the object/component system, interacting with a flexible, task-based threading model, which allowed for performance and scene complexity to scale with the number of cores on target devices
- Developed Origami Sky, an interactive, VR demo with thousands (scalable with hardware) of dynamic, flocking cranes, dragons, floating lanterns, point and directional lights
- Developed resources and system for bounding volume and triangle based picking, utilized for shooting elements in Origami Sky and selection/transformation of objects in the editor
- Developed the runtime delegates for processing web socket commands to support real-time and collaborative editing of objects, components, and attributes
- Developed "preview play" feature that allows for in editor play back, pause, stop, and reset of scenes in development, while still allowing live and collaborative editing
- Developed standard library compatible container classes to meet requirements of stability, consistency, and performance across all target platforms
- Developed configuration system for data driving applications and demos
- Developed state machine used by scripting library
- Participated in hiring process, performing phone screens and interviews, usually focusing on C++, design, and problem-solving
- Regularly ran performance analysis and did general optimization
- Habitually performed code cleanup passes and refactors to simplify and optimize various systems
- Performed and participated in regular code reviews
- Wrote several technical design documents and briefs

9/2010-2/2015 Multimedia Games, Inc. (Lead Software Developer III)

- Lead a team of programmers, assisting with scheduling, conducting design and code reviews, one on ones, team meetings, and delegation
- Developed skeletal animation system and related effects that used XML animation data and assets exported from Adobe After Effects. Where possible, this system replaced bulky, inefficient video assets while giving artists control over other types of animation typically done by programmers.
- Developed several video and mechanical casino games with complex bonus features
- Contributed to the design of an "effects" system that componentized

Languages

C++
C
Lua
JavaScript
Python
XML
HTML
Some C#
Some Objective-C

Libraries

STL
Boost
wxWidgets
MFC
Qt
Win32
DirectX & HLSL
OpenGL & GLSL
Open AL
FMod
LuaBind
Bink
iOS SDK
3DS Max SDK
FBX SDK
Gamebryo
Free Image
Free Type
Bullet Physics
Newton Dynamics

Software

Windows
Mac OSX
Visual Studio
XCode
3DS Max
Maya
Photoshop
VTune
GlowCode
MS Office
Perforce
Subversion
CVS
Jira

and data-drove presentation logic, reducing the complexity, memory utilization, and code footprint of developed games
- Assisted programmers throughout the department with problem solving, technical designs, debugging, game features, and mentoring on a daily basis
- Reviewed majority of applicant programming tests, conducted phone screens, in person technical, object oriented, and design interviews
- Conducted tutorials, presentations, and study groups to educate other programmers on graphics programming, shaders, JavaScript, Design Patterns, Code Complete, Effective C++, Effective STL
- Evaluated and wrote proposals to identify ways to improve tools, game technology, and workflow

8/2009-6/2010 Flying Wisdom Studios (Lead Software Engineer)

Exo-Planet (iOS)
- Lead team of programmers to develop multi-player, 3D, 3rd person shooter with training, time trials, capture the flag, and death match in space and zero gravity.
- Lead development of core systems, game engine, OpenGL ES 1.1 and 2.0 based graphics engine, art asset pipeline and converters, entities, client/server network events, physics and collision, skeletal animation, animation blending, skinning, particles, shaders, cameras, core gameplay
- Octree based world entity and ray casting system used for lighting and shadows, surface and edge detection, jumping, grappling, weapon targeting, player and camera logic
- Routinely traveled to Buenos Aires and San Francisco to work with developers of front-end, network API, micro transaction elements, and social features

10/2008-2/2009 Super Happy Fun Fun (Lead Software Engineer)

iOS Engine Lead
- Developed iOS, OpenGL ES 1.1, 3D graphics engine, importers, file system, input handling, and other systems
- Conducted interviews

Snowboarding TnT (iOS)
- Lead engineer for game play, user control, physics, collision, effects, object interaction, and other systems

Big Buck Hunter Pro and other Projects (IOS)
- Engine development and support

11/2005-8/2008 NCsoft (Software Engineer)

Dungeon Runners
- PS3 port

Tabula Rasa
- Visual FX and art/design tools programmer
- Developed features while supporting systems and tools for artists and designers: visual effects, particle effects, camera effects, projectiles, UI editor, model viewer, 3DS Max exporter and scripts, and asset reporting
- Added features to world editor for audio placement, terrain auto-painting, object grouping, and prefabs/templates
- Game configuration, options, and registry system
- In-game UI elements, alerts, and options
- Profiling and optimization

9/2004-11/2005 Multimedia Games, Inc. (Game Programmer)

- Developed and ported several DirectX based casino and mini games
- Assisted programmers with problem solving, debugging, and other challenging game features

7/1999-8/2004 Acclaim Entertainment (Game/Lead Programmer)

All Star Baseball 2006 (PS2, Xbox)
- Lead programmer, profiling, optimization, updating downloadable content system, scheduling, general team support

The Red Star (PS2, Xbox)
- Provided additional programming for player/camera interaction, mini games, cut scenes, and R&D

NBA Jam 2004 (PS2, GameCube, Xbox)
- Responsible for AI, animation and transition systems, steering behaviors, cut scenes
- Worked closely with artists to gather requirements, design, and build a particle and special effects engine and MFC-based editor, featuring spline animation and hierarchical effects

NFL Quarterback Club 2002 and 2003 (PS2, GameCube, Xbox)
- Responsible for player AI and related systems, game play, game flow, player control, animation, cut scenes, camera, and movement

Turok 3: Shadow of Oblivion (Nintendo64)
- Boss AI and arenas

South Park: Chef's Luv Shack (Nintendo64, PlayStation, PC, Dreamcast)
- UI, score screens, mini games

Education

University of Texas Austin 1996-1999
- Completed 2.5 years coursework towards B.S in Electrical Engineering | Computer Engineering
- Relevant courses: Calculus, Linear Algebra, Physics, Logic, Data Structures and Algorithms, Software Design and Implementation

Personal Projects

BeastWorks CAGE (component assembled game engine and editor)
- Constantly researching, learning, developing a cross-platform, game engine, and WYSIWYG, real-time toolset, currently supporting Windows, OSX, iOS