

BRIAN EHLERT

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EDUCATION

Bachelor of Science in Real-Time Interactive Simulation

2011

DigiPen Institute of Technology – Redmond, WA. *Mathematics Minor, Cumulative GPA: 3.91*

TECHNICAL SKILLS

LANGUAGES: C/C++ (intensively for 3 years), Lua, HLSL, C#

APIS/LIBRARIES: Direct3D 9, OpenGL, Win32, XInput, Autodesk FBX SDK, Boost, wxWidgets

TOOLS: Visual Studio 2005-2010, Perforce, SVN, PIX for Windows

COURSEWORK: C/C++ Programming, Linear Algebra (Matrices, Vectors), Data Structures, 2D/3D Graphics, Networking, Artificial Intelligence, Quaternions, Discrete Math, Curves and Splines, Nintendo DS and Wii Development

PROFESSIONAL EXPERIENCE

Programming Intern

5/2010 – Present

Airtight Games

- Worked on internal tools development and modifications to Unreal Engine 3
- Responsible for integrating monthly Unreal Engine 3 updates into our codebase and helping streamline the process for our company
- Managed the build pipeline for multiple projects

GAME PROJECTS

Graphics Programmer

8/2009 – 4/2010

Abyss – 3D Platform Game

- Developed a 3D graphics engine using Direct3D 9 and acted as a C++ and technical resource for the other 4 programmers on the team
- Implemented deferred lighting, cascaded variance shadow mapping, projective texturing, post-processing, skinned animation, normal mapping, particle systems and bitmap fonts
- Wrote an exporter for Autodesk's FBX format used for efficient loading of 3D models and collision volumes
- Designed and implemented a 2D overlay system supporting varying aspect ratios and screen resolutions
- Developed an XML-driven material system to automate setting shader parameters
- Gave presentations on upcoming C++ features including shared_ptr and TR1 (Technical Report 1), lambda expressions, and rvalue references

Engine Programmer / Tech Director

9/2008 – 12/2008

Breakin' Loose – 2D Action Game

- Developed a 2D game engine using C++ on a team of 4 programmers and 1 artist
- Designed a data-driven object composition system allowing for tweaking objects without recompiling
- Integrated Lua to allow for scripted object behavior

OTHER PROJECTS

Networked Space-Shooter, A* Pathfinding, Memory Manager, Quaternion Interpolation, Curve and Spline Viewer, View Frustrum Culling, BSP-Tree, Kd-Tree, Normal Mapping, Reflection/Refraction Mapping, Hierarchical Occlusion Mapping

MILITARY EXPERIENCE

Infantry Sergeant, United States Marine Corps

2003 – 2007

Led Marines as a Non-Commissioned Officer. Instructed Marines in combat-related skills, with a focus on gunnery. Completed two combat tours in Iraq.