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Work Experience

September 2009 – Present » Electronic Arts Canada » Lead Systems Programmer

Titles

- Unannounced Project

Accomplishments

- Developed a modular/Dll/PRX component framework
- Created a data driven messaging system
- Involved in management and scope planning
- Contributed to plans for outsourcing
- Designed and implemented core engine technologies
- Created bindings between Lua and the core engine
- Presented to other groups about our designs and plans
- Developed the DLC plan
- Performed extensive debugging and optimization

January 2008 - September 2009 » Electronic Arts Canada » Senior Systems Programmer

Titles

- Grand Slam Tennis (Wii)
- Grand Slam Tennis (Xbox 360/PS3)

Accomplishments

- Implemented Rich Presence (Xbox 360)
- Developed replay system with variable size frames and compression
- Implemented Achievements (Xbox 360)
- Implemented Trophies (PS3)
- Developed Auto Instant Replay (AIR); editor and runtime
- Planned and implemented load time optimizations
- Performed extensive debugging and optimization
- Implemented cross-platform hi-res screenshot
- Performed tracking and fixing of memory leaks
- Modified the autosmoke system to be able to be run locally
- Implemented online commerce/DLC/PULC; runtime and pipeline
- Implemented game side of saving and loading framework

March 2006 – December 2007 » Electronic Arts Canada » Systems Programmer

Titles

- NHL 07 (Xbox 360)
- NHL 08 (Xbox 360/PS3)

Accomplishments

- Implemented custom memory managers and allocators
- Created a custom file system
- Updated various internal libraries
- Performed extensive debugging and optimization
- Wrote a stomp detection allocator
- Found and fixed various memory leaks
- Split the game's core so that the simulation and render ran on separate threads
- Oversaw and worked on the NHL 07 Xbox Live demo
- Performed the initial port of our code from Xbox 360 to PS3; making it compile and run on both platforms
- Upgraded various XDK/SDK(s) and tool chains
- Split the loading system to read, decompress and fix up files in separate threads in parallel
- Wrote the file caching system used on Xbox 360

April 2005 – March 2006 » Ubisoft Montreal » Audio/Generalist Programmer

Titles

- Open Season (Xbox 360/Xbox/PS2/Game Cube)

Accomplishments

- Library upgrades: brought the sound library up to date from version 10 to version 24 seamlessly over all platforms
- Refactored the existing audio system and fixed the problems caused by switching the engine from a first person game to a third person game
- Implemented a dynamic music system
- Integrated Lip-synching for the audio into the game engine and the data build process
- Added real time interactive audio preview and editing into our level editor (Unreal Ed)

March 2004 – March 2005 » HB Studios » Technical Lead

Titles

- EA SPORTS Rugby 2005 (Xbox/PS2/PC)

Accomplishments

- Managed a team of ten programmers
- Instituted a coding standard
- Separated our code into libraries which could be shared by all games and game specific code
- Moved the studio's primary programming language from C to C++
- Worked closely with the designers, producers and the Lead Artist to ensure that all aspects of development had the same vision of the game
- Kept everyone motivated and on schedule
- Separated our code into library code which could be shared by all games and game specific code
- Developed the asset build system that was then adopted across all studio titles
- Developed a replacement for Rt2d (RenderWare's 2D drawing toolkit) which has been used by both Cricket 2004 and Rugby 2003 using EAGL
- Wrote various custom allocators to save space and fragmentation
- Moved portions of the game to a data driven development model
- Debugged and fixed various key problems found throughout development
- Worked on optimizing various areas of the game
- Through the duration of the project we never missed a deadline

January 2001 – March 2004 » HB Studios » Programmer

Titles

- EA SPORTS Cricket 2002 (PS2/PC)
- EA SPORTS Cricket 2004 (PS2/PC)
- EA SPORTS Rugby 2004 (PS2/PC)

Accomplishments

- Rewrote our DirectSound/DirectMusic sound engine
- Changed our file packing tool and runtime to translate file names into MD5 keys to reduce space used for file names in memory, as well as to speed up look-up times
- Created a platform independent wrapper for RenderWare 3.4-3.6(s) shaders
- Developed the cross-platform (PC/PS2) memory card library used across titles
- Implemented the entire front end from scratch for Cricket 2002
- Managed all player statistics and game flow AI for the Cricket titles
- Developed player/team editors for all titles
- Developed an XML driven tournament schedule generation tool that allowed specific tournaments to be setup as well as templates to be made. When a template was loaded the game initialized it by setting a list of constants.
- Developed a virtual file system with simple key based encryption
- Created a logging system that output to a file, Visual Studio's output pane, and custom external window with filtering and coloring

Skills

Languages

- C/C++
- JavaScript
- Lua
- Python
- PHP
- C#
- Perl
- Lisp
- Java

APIs/Engines

- Direct X
- RenderWare 3.4-3.6
- LithTech
- Unreal Engine 2.X

Platforms

- Xbox 360
- PS3
- Wii
- Xbox
- PS2
- Game Cube
- PC

Interests

- Genetic Algorithms
- Expert Systems
- Neural Networks
- Knowledge Representation
- Cryptography
- File Systems
- Compression
- Allocators

Education

University of New Brunswick

- Computer Science Program

NBCC-Miramichi

- Knowledge Engineering Program (Artificial Intelligence)

Carleton North Senior High School

- Academic Diploma