

YoungHwan, Kim

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Professional Summary

- **tri-Ace, Inc.**
 - Junior / Senior game engineer. (Xbox360, PS3)
- **Nexon Co., Ltd.**
 - Senior Client / Server engineer. (PC)
- **Square Enix Holdings Co., Ltd.**
 - Senior core client system engineer. (PS3, PS4, PC)
 - R&D Senior animation unit engineer. (PS3, PS4, Xbox One, PC)
- **Cygames, Inc.**
 - Lead optimization / graphics engineer. (Unity) (iOS, Android)
 - Animation system architect of Cyllista high-end game engine (PS4, PC)
- **Square Enix Holdings Co., Ltd.**
 - Lead Animation/Physics system engineer. (havok) (PS4, PC)

Experience

Dec, 2006 ~ Dec, 2009

(Japan) tri-Ace Inc.

(JRPG) Star Ocean 4 - The Last Hope (Xbox360/PS3)

- Game Engine side
 - Maintenance of the texture editor of the in-house game engine 'Aska'.
 - Implemented some MEL scripts and plug-ins to support animators.
 - Game side (Battle team)
 - Implemented character controls (players / enemies)
 - Implemented a variety of camera controls
 - Implemented some post-effects
 - Managed resource data
 - Optimized some game features and parallelized them on PS3 SPU
 - Game side (Field Team)
 - Implemented a mini game, 'Bunny Race'
- ✓ **The number of the project members:** About 60~100.
 - ✓ **The number of programmers:** About 30 (including R&D programmers).
 - ✓ **My position:** A gameplay programmer.
 - ✓ **Skills:** C/C++, Windows API, MFC, XML, DirectX 9, OpenGL, Maya MEL script, Visual Basic, Intel x86/IBM Power PC Assembly.
 - ✓ **Tools:** Microsoft Visual Studio 2005 Professional, Maya Unlimited, SVN, IncrediBuild, and etc.

Apr, 2010 ~ Apr, 2011

(South Korea) NEXON Co., Ltd.(Racing) Crazy Racing Kart Rider (PC Online)

- Domestic market team
 - Managed online service of gameplay.
 - Optimized core client system.
 - Optimized network traffic.
 - Implemented some 3DS Max Plug-ins to support animators.
 - Led new contents development engineering. (from pre-pro to release)
 - Managed gameplay quality.
- ✓ **The number of the team members:** About 40.
- ✓ **The number of Programmers:** About 8.
- ✓ **My position:** A senior client/server programmer / Lead programmer of the new contents team.
- ✓ **Skills:** C/C++ (Boost Library, STL Port), Windows API, MFC, DirectX 9, XML, C#, Lua, Network (TCP / IP).
- ✓ **Tools:** Microsoft Visual Studio 2003, Visual Assist X, 3ds Max, Gamebryo, SVN, IncrediBuild and etc.

March, 2013 ~ July, 2015

(Japan) Square Enix Holdings Co., Ltd.**> Business Division 5 : (MMO RPG) Final Fantasy XIV – A Realm Reborn.**

- Belong to Contents team: March, 2013 ~ June, 2013
 - Implemented some game features and monster controls.
- Belong to Client System team: July, 2013 ~ June, 2014
 - Optimized and parallelized the core backbone feature, 'Timeline' system.
 - Reprogrammed the system memory allocator to get rid of serious bottlenecks and to get far better performance.
 - Managed animation system based on Havok Animation.
 - Resolved some unsolved bugs.
 - Fixed an IK process in a mess and parallelized it for optimization.
- ✓ **The number of the project members:** About 350 ~ 380.
- ✓ **The number of programmers:** About 80.
- ✓ **My position:** Senior game programmer / Client System programmer / Animation programmer.
- ✓ **Skills:** C/C++, STL, Lua, Network (TCP/IP), Assembly (x86 / x64, Power PC), SIMD (MMX, SSE#), High level math skills (Advanced engineering math).
- ✓ **Tools:** Microsoft Visual Studio 2008/2010, Perforce, IncrediBuild, PS3/PS4 SDK, Havok, and etc.

> Advanced Technology Division (R&D) : Luminous game engine / Final Fantasy XV

- Belong to Animation Unit: July, 2014 ~ July, 2015
 - Worked in FFXV project as a Luminous animation unit programmer.
 - Optimization support of Luminous animation system.
 - Added & Optimized some Luminous math library.
 - Implemented some character move controls to support FFXV.
 - Implemented an automated lip sync animation system and its data pipeline based on a voice analyzer.

- ✓ **My position:** R&D senior animation engine programmer.
- ✓ **Skills:** C/C++, C#, SIMD (SSE#), High level math skill (Advanced engineering math), Python.
- ✓ **Tools:** Microsoft Visual Studio 2012, PS4 SDK, Xbox One SDK, Perforce, IncrediBuild, and etc.

August, 2015 ~ May, 2017

(Japan) Cygames, Inc.

**> Smart phone application : (Card Battle) SHADOW VERSE (iOS/Android) :
August 2015 ~ April 2016**

- Gameplay
 - Implemented some UI. (NGUI)
- Responsible for graphics.
 - Implemented shaders.
 - Implemented scripts.
- Responsible for Performance.
 - Profiling throughout gameplay (CPU / GPU).
 - Optimized shaders.
 - Optimized resources.
 - Optimized CPU & GPU processes.
- ETC
 - Managed core system code.
 - Responsible for hardware dependent troubles.
 - Added some custom editors into Unity to support graphics designers.
 - Shared my knowledge with team members to create more efficient resources.
- ✓ **My position:** Lead technical engineer.
- ✓ **Skills:** C#, HLSL, Cg, JSON, PHP.
- ✓ **Tools:** Unity, Visual Studio 2013, GitHub, Xcode, Adreno GPU Profiler, and etc.

**> High-end game engine Cyllista : Making a game engine from scratch (PS4, PC) :
May 2016 ~ May 2017**

- Designed & Implemented the foundations of the animation system
 - Implemented Maya plug-ins
 - Implemented data converter and pack file maker.
 - Implemented keyframe compression algorithm.
 - Implemented IKs.
 - Implemented some SIMD math libraries.
 - Implemented blend trees.
 - Implemented physics-based root motion.
 - Implemented a switchable rig based animation system.
- ✓ **My position:** Animation system architect.
- ✓ **Skills:** C/C++, Python, SIMD, Groovy, Json, Yaml.
- ✓ **Tools:** Visual Studio 2015, Autodesk Maya, GitHub, Perforce, Photoshop, Jenkins.

July, 2017 ~ Sep, 2019

(Japan) Square Enix Holdings Co., Ltd.**> Business Division 5 : A new high-end title (veiled)**

- Animation system
 - Led animation system.
 - Implemented havok based animation system.
 - Managed team members' code.
 - Implemented leg IK.
 - Implemented upper body IK.
 - Implemented lockless parallel task system.
 - Managed & optimized ragdoll feature.
 - Implemented data pipeline.
 - Implemented editors & converters.
 - Profiled & Optimized.
 - Physics system
 - Technology support.
 - System improvement support.
 - Optimization support.
 - Trouble shootings.
 - Havok
 - Managed havok engine (Animation, Physics, Contents Tools).
 - Implemented new plug-ins into the Contents Tools for use of animation.
 - Trouble shootings
 - e.g. floating point error accumulation problems, memory management, and etc.
- ✓ **My position:** Lead animation programmer.
- ✓ **Skills:** C/C++, Havok, SIMD, Python, Json.
- ✓ **Tools:** Havok, Visual Studio 2015 & 2017, Perforce, Maya, FlatBuffers, Jenkins.

Education

Mar, 1999 ~ Jul, 2000

(South Korea) Soongsil University

- College of Natural Sciences – Mathematics / Information Statistics
- ✓ Leave of absence

Aug, 2000 ~ Feb, 2003

(South Korea) The military

- Fulfilled the mandatory military service
- ✓ Completed

Apr, 2004 ~ Feb, 2005

(Japan) Tokyo Bay Side Japanese language school

- Japanese language school
- ✓ Graduated

Apr, 2005 ~ Mar, 2007

(Japan) Japan Electronics College

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- Game Production Course / Game Programming
 - ✓ Graduated

May, 2011 ~ May, 2012

(USA) College of Central Florida

- Computer Information Technology – Software Track
- ✓ Leave of absence

Software / system skills

Skills

- C/C++, C#, Assembly (x86/64, Power PC), SIMD (MMX, SSE#), Python, Lua, Network(TCP/IP), Json, Yaml, PHP, Objective-C, Windows API, MFC, XML, DirectX, OpenGL, Maya Script, Visual Basic, Shader (Cg, HLSL), Havok, and etc.

Software

- Microsoft Visual Studio, Maya, 3DS Max, SVN, Perforce, GitHub, Xcode, Android Studio, IncrediBuild, PS3 / Xbox 360 / PS4 / Xbox One SDK, Boost Library, STL Port, Havok, Unreal Engine 4, Unity, Ogre Engine, FlatBuffers, and etc.

Language Skills

Korean (Native)

Japanese (Fluent) : JLPT Level 1

English (Familiar) : TOEIC 780...

Interests

Swimming (master class) : Self-claimed **beautiful swimmer~**

Investment (beginner) : Reading books, studying and trying to accept inscrutable investor psychology.

Feeding ducks on the river : Do you know that? Mallard is the 7th highest flying bird!

Flower viewing : I prefer wildflowers.

