

# Michael Kang

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<http://kjune.com>

## Game Programmer

**Creative**

**Efficient**

**Organized**

**Analytical**

A Game Programmer with expertise in Rendering, Animation, Tools and Game Play. Two Bachelor's degrees in Physics and Computer Sciences and Master's course in Media Technology completed. Shipped one web-based game (justleapin.com) and involved in 25 VR and Game related projects for 8 years in different platform. A creative and active gamer, passionate about cutting edge industry technologies.

### Professional Expertise

<b>Software Development</b> Design, Estimate, Plan, Implement and Test software products	<b>Consulting/Customer Service</b> Determined the customer needs and requirements and realize	<b>Multi platform</b> MS Windows, Mobile(WIPI-C, GIGA), POSIX(IBM-AIX, Sun Blade), Mac
<b>Language</b> C/C++, C#, STL, Boost Python, Perl, OpenMP	<b>3D Graphics</b> OpenGL/GLES, Direct X, nVidia Cg, HLSL, GLSL	<b>3D/Game Engine</b> Unity3D, Ogre3D, Woori Engine, mVR Engine, Lux Render,
<b>Windows Development</b> Win32 API, MFC, Active X, COM, Extreme Toolkit	<b>Web programming</b> PHP, JavaScript, HTML, flash	<b>Database</b> MySQL, MSSQL, ODBC, ORACLE
<b>Development Environment</b> Visual Studio, XCode, Code Warrior, GCC, GDB, xlc_R	<b>Project Management</b> Agile, Trac, SVN, CVS, Dokuwiki, CruiseControl.net, Clearcase	<b>Performance Tuning and TDD</b> Compuware Devpartner, VLD, gDebugger
<b>Install Systems</b> Install Shield, NSIS,	<b>3D DCC development</b> 3DS Max script, OpenMaya API, FCollada, MEL	<b>DCC Tools</b> Maya, Photoshop, 3DSMax, Flash, Premiere

### Selected Accomplishments

- **JustLeapIn.com (2007-2009):** Designed and implemented the game component of VR based 3D Social Network, justleapin.com by leading 3 other game programmers and collaborating with art and web team. Managed the team with agile development method and setup the best practices and code standards. Optimized the build process with Python and Perl and set up a SVN version control structure for C# and C++ code base. Organized the manager systems structure and implemented avatar creation and animation module, network and data transfer module and caching and debug module.
- **mVR Framework (2007):** Designed and implemented the mVR framework for the SK Telecom. Implemented the PC based Shader Engine component of the framework with nVidia Cg and OpenGL. Shader performance analysis and tuning is conducted with nVidia's FX Composer and Graphic Remedy's gDebugger.
- **CFD Crowd Simulator (2006):** Designed and implemented crowd simulation program that can visualize the crowd movement in public building. Read the CFD (Computational Fluid Dynamics) data generated from Fluent and visualized the crowd movement in 3D view. Utilized OpenGL, nVidia Cg and MD5 characters (from Half-life). VBO and hardware skinning are also used to accelerate the crowd simulation.
- **ATI Mobile 3D Integration (2005):** Collaborated closely with ATI and ported many features of ATI Imageon 238x chips. Implemented ATI API as a GIGA Extensions API. Ported "Rooms Demo" of ATI into SKT WIPI-GIGA platform and demonstrated in ATI PCI board.

## Professional Experience

### Game Programmer / Manager

Leap In Entertainment *Vancouver, B.C, Canada*

2007 ~ 2009

*Developer of Virtual Reality 3D Social Networking Site, <http://www.justleapin.com>*

- Designed and implemented the game component of browser based 3D game with Unity3D engine featuring object manipulation, media deployment, download manager, character animation and web interface module.
- Modified the Unity3D game engine source code to expand the features such as asset caching and additional texture compression and built own plug-in application.

### Team Lead Engineer / Manager

SK Innoace *Seoul, S. Korea*

2005 ~ 2007

*Mobile platform developer and R&D firm for SK Telecom. Official provider of WIPI and GIGA mobile game platform*

- Participated in the design of the entire mVR (mobile Virtual Reality) system and took the charge of the implementation of the PC based shader engine module using OpenGL, nVidia Cg as well as GPU performance tuning and analysis.
- Provided technical guidance and consultation on SKT's GxG Premium Game Services. Development of new markets for SK Telecom and technical liaison between game companies and hardware vendors.
- As a part of GIGA Class 4 project, established and revised GIGA specifications, the mobile game platform specialized in 3D graphics and game related special features. Implemented the features to the WIPI-GIGA Emulator and provided the hardware adaptation kit to the manufacturer and WIPI-GIGA SDK to the mobile game developer.
- Participated in Next Generation GIGA project with ATI. Reviewed the advanced features of ATI Imageon 238x chip and made the WIPI-GIGA contents run on the ATI PCI board through the emulator and ATI PCI board. Ported "Rooms demo" of ATI into WIPI-GIGA application.

### Team Lead Engineer / Assistant Manager

Youl Systems Inc., *Seoul, S. Korea*

2002 ~ 2005

*Industrial CAD and VR Company provides customized solutions for government, nuclear power plants, construction industry and enterprises*

- Developed extra features to WalkInside™ from VRContext and integrated it into IPIMS, a power plant design mainframe of KOPEC, a power company. Excellent communication and leadership skills and extensive knowledge in 3D application and COM were essential.
- Led and implemented "Web based 3D house design system" for Posco Construction Corporation where users can design houses on the web. It required ActiveX, OpenGL and communication with ASP, MS SQL and design data repository.
- Led and implemented the project of "3D subway station facility management system" for Korea Subway Corporation. It involved World Up programming, database manipulation, multiple 3DS Max file(.3ds) parsing and manipulation
- Developed "Samsung Digital Palace" for Samsung Electronics, a virtual simulation program demonstrated home networking features of Samsung appliances.

## Professional Development

**Media Technology, MS Candidate**, Sogang University, Seoul, S. Korea

2002

**BSs Physics**, Chonbuk National University, Chonbuk, S. Korea

2000

**BEs Computer, Information and Communication Engineering**, Chonbuk National University, S. Korea

2000

## Other Skills

Fluent in English and Korean.

Mandatory 2 years military service with US army (outsourced from Korean army) as a Sergeant.