



## OBJECTIVE

To program games alongside talented developers – supporting them in every way I can, providing effective work capacity, creativity, and passion towards the challenges of producing a top-quality title.

## EDUCATION

**DigiPen Institute of Technology** (Redmond, WA)

September 2006 – April 2010

Bachelor of Science in Real-Time Interactive Simulation (Computer Science)

**Minor:** Mathematics

**Concentration:** Advanced C++, Game/Software Development, Physics Simulation

## SKILLS & REPERTOIRE

### Languages:

- C / C++
- Lua
- XML
- HTML / CSS
- Intermediate C #
- Intermediate x86 asm

### Frameworks/APIs:

- NVIDIA PhysX
- OpenGL
- DirectX
- STL
- Nintendo Wii SDK
- GameBoy GBA/GBC

### Dev Tools:

- Visual Studio
- SVN
- 3ds Max
- Photoshop
- Trac / JIRA
- Agile / Scrum

### Math:

- Quaternions
- 3D Euclidean Math
- Adv. Calculus
- Linear Algebra
- Splines & Surfaces

### Spoken Languages:

- English (Fluent)
- Japanese (Fluent)
- Indonesian (Fluent)

### Game Engines Built (from scratch):

#### 3D Physics Engine:

- 3D rigid-body simulation
- SAT collision detection
- Boxes/Spheres/3D-meshes
- Impulse based resolution
- Friction, springs, rods
- Quaternion rotations

#### 3D Graphics Engine:

- OpenGL / GLSL
- Texture mapping
- Lighting & shadows
- Normal mapping
- Reflection/cube maps
- Spatial partitioning

## INDIE GAME DEVELOPMENT EXPERIENCE

Videos, screenshots & more projects @ <http://mike.shiftingrealities.com/Projects.html>

### ● **Rev.Eng: The Reversal Engine** (C++, Lua, XML)

September 2009 – April 2010

Edible Games (Indie Developer) – 11 person team

**Primary Role:** Producer / Project Lead

**Concept:** “A 3rd-Person-Shooter where weapons are powered by *Rev.Eng* energy stolen from enemies”

**Responsibilities:** Team Management, NVIDIA PhysX Engine, Gameplay Camera, Character Movement, Attacks

**Awards:** Best Senior Game & Best Senior Technology (DigiPen, 2010)

### ● **Stacks** (C++, Revolution SDK, Nintendo Wii)

May 2009 – August 2009

Individual Project – 1 person team

**Primary Role:** Wii/Revolution SDK Programmer

**Concept:** “A 1st-Person-Shooter tech demo for the Wii with an element of block-stacking-puzzle”

**Responsibilities:** Wii SDK integration, 3D Graphics & Physics Engine, Wii FPS controls, Gameplay Logic

### ● **Worlds Beyond** (C++, Lua, XM)

September 2008 – April 2009

Prelude Studios (Indie Developer) – 4 person team

**Primary Role:** Technical Director

**Concept:** “An arena-based, cartoony, frantic 3D shooter with lots of spectacular special attacks”

**Responsibilities:** 3D Physics Engine, Character Movement, Boss Enemy, Special Attacks, Game Logic & Scripting

### ● **Teapot Party** (C++, Lua, XML)

September 2008 – December 2008

Prelude Studios (Indie Developer) – 3 person team

**Primary Role:** Physics Lead Programmer

**Concept:** “A quirky, addictive mini-game of collecting teapots scattered about an ever-changing terrain”

**Responsibilities:** Game Concept/Design, 3D Physics Engine, Terrain Collision, Teapot Behaviors, Game Logic