

AMRO AMRO

PHYSICS PROGRAMMER | COMPUTER ENGINEER | GAME DESIGNER

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TECHNICAL SKILLS +

- Game Development
- Calculus and Analytic Geometry
- Physics Simulation
- Computer Architecture
- Game Engine Maintenance
- Graphics Programming
- 3D Modeling and Animation
- Digital Signal Processing
- Narrative Creation

LANGUAGES +

C / C++
JAVA
C#
PYTHON
VERILOG
ZILCH SCRIPT

SOFTWARE SKILLS+

VISUAL STUDIO
UNREAL ENGINE 3 & 4
UNITY
3DS MAX
MAYA
BLENDER
PRO TOOLS
LOGIC PRO
DOXYGEN

COMPILERS +

MSVC
GNU GCC / G++

OS +

WINDOWS
MACINTOSH
UBUNTU

TOOLS & API +

GIT
SVN

EDUCATION +

Masters of Science in Computer Science (April 2016)

Digipen Institute of Technology, Seattle, Washington

Bachelor of Science in Computer Engineering (May 2013)

Boston University, Boston, Massachusetts

WORK EXPERIENCE +

Primary Teacher (DigiPen ProjectFUN Workshop) (9/2014 - 3/2015)

- Taught a class of junior high schoolers how to build and program with their own Arduino
- Taught a class of junior high schoolers how to program with C++

Teaching Assistant (DigiPen ProjectFUN Workshop) (9/2014-3/2015)

- Assisted with both computer programming and game design classes utilizing C++ and ZilchScript

ACCOMPLISHMENTS +

Cloth Simulation (Personal Project) (11/2016)

Simulated cloth using springs and compared simulation between several integrators. (C++, Solo)

- Created several different integrators to test the cloth for the best simulation (Euler, Semi-Implicit, Verlet, etc.)
- Created spring objects that holds the cloth together

Animation and Modeling (8/2015-11/2015)

Created an interface to load a skeleton rig for animation. (C++, Solo)

- Programmed an interface to load a rigged skeleton and its animations.
- Used inverse kinematics to control limbs.
- Interpolated animation speed based on distance traveled or any other desired factor.

FEATURED GAME PROJECTS +

A Little Bit (DigiPen Student Project) - Game Designer (8/2015 - Present)

3D perspective puzzle game. (Custom Engine, Team of 6, C++)

- Oculus Rift student project where I acted as a primary game and level designer.
- Game takes place inside of a "CPU" where you play as a bit with the job of rebooting the "CPU."
- Helped guide the production of the game and keeping it within scope.

Magnolia (DigiPen Student Project) - Game Designer (8/2015 - Present)

3D poetic experience dedicated to the memory of a little girl named Magnolia. (Custom Engine, Team of 10, C++)

- Designed narrative and level layouts.
- Worked alongside Magnolia's father to attain a meaningful experience as tribute to Magnolia.
- Helped create models and special effects for the game.

Tower of Trials (DigiPen Student Project) - Producer and Physics Programmer (8/2015 - Present)

3D platformer game where you solve puzzles as you climb a huge tower. (Custom Engine and Unreal Engine, Team of 4, C++)

- Served as Producer and Physics Programmer for the platformer.
- Primary game designer.
- Game tells the story of a geeky protagonist that climbs a huge tower to impress a girl.
- Implemented physics system that uses RK4 Integration with SAT and GJK collision detection and resolution.
- Took up the Game Designer position when original team designer left.

Book of Odz (DigiPen Student Project) - Producer and Gameplay Programmer (1/2015 - 4/2015)

2D platformer in which the player goes through various storybooks looking to get back home. (Custom Engine, Team of 4, C++)

- Producer and gameplay programmer of four man team
- Primary game designer.
- Maintained schedule and task list.
- Used my own personal custom engine.