

Chris Hekman
Game Programmer

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Summary

C++ Programmer with a passion for software development, especially in the areas of game-development and graphics. Won various awards as a student, including the *Independent Propeller Award*, consisting of \$25,000. Completed a programming internship at *DICE*, the creators of *Battlefield*, and worked as a software developer at several companies during university.

Titles and Projects

Commercial Titles:

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|---------------------------------------|-----------------|
| Battlefield 4 | Internship |
| Terraria (iPhone/iPad version) | Game programmer |

Student Projects:

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| Chewy | Design lead and Game-play programmer |
| - Won Best Design at Independent Propeller Award 2011 (\$25,000 prize) | |
| - Diamond Award at Festival of Games 2011 | |
| - Best game of the year at Brave New Game 2011 (€500 prize) | |
| Sumo Salad | Game-play programmer |
| - 1st Place – Games [4Health] Jam (€500 Prize) | |
| - 1st Place Realization – Health 2.0 Challenge (€5000 Prize) | |

Employment

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|----------------------------------|------------------|--------------------------------|
| BossAlien - NaturalMotion | 10 Months | November 2014 - current |
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Game Programmer.

At boss BossAlien I work on an as of yet unannounced project for iOS and Android. I have developed various content pipelines, and worked on gameplay, UI, and architecture. I am particularly proud the automated testing system I created which allows QA to record user-input as automated tests. These can be replayed on multiple different devices.

Tools and Techniques: C#, Unity, iOS/Android.

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| Indicia - Contract | 4 Months | September - December 2013 |
|---------------------------|-----------------|----------------------------------|

3D Tools Software developer.

At *Indicia* I worked on a 3D printing and modelling application intended for home use. The application allows users design and print various 3D items such as cups, glasses, plates and rings. My contribution included working on the graphics engine and shaders used for displaying the 3D models and GUI. Other tasks included save-file serialisation, user input handling, debugging, and profiling. Additionally I researched voxels and I wrote a polygon to voxel mesh converter. I worked closely with the client and marketing team, making sure the product adhered to their vision while remaining technically possible.

Tools and Techniques: C++, OpenGL, GLSL(Shader), Visual Studio, MySQL, XML, Objective-C, iPad.

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| CodeGlue – Summer Job | 3 Months | June - August 2013 |
|------------------------------|-----------------|---------------------------|

Game Programmer.

At CodeGlue I worked on porting the critically acclaimed indie game *Terraria* to the *iPhone* and *iPad*. My duties included adding and rewriting handheld specific features. Additionally I worked on polishing the game through debugging, testing, and software profiling. Because of positive performance I was asked to stay a few weeks longer to alleviate their workload.

Tools and Techniques: C++, Xcode, iPhone/iPad.

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| DICE (EA Digital Illusions CE) - Internship | 5 Months | August - December 2012 |
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Internship. (3D Graphics Tools developer)

I did an internship at the acclaimed game-studio *DICE*, the creators of the award winning series *Battlefield*.

At *DICE* I created a graphical game asset used for streaming very large cinematic mesh animations as part of my internship project. The goal of the project was to allow artists to stream data heavy key-frame animations for the purposes of animating water, avalanches, collapsing buildings or other (procedural) effects.

The system I created utilizes and is integrated with many of the *Frostbite 3* Engine features. These features include the Job Manager, Scripting system, *FrostEd* (*Frostbite* level editor), File Loader and Graphics engine. Additionally I added *Alembic* file support to facilitate the use of animations created by tools such as *Houdini*, *RealFlow* and *Maya*.

At the end of my internship *DICE* gave me a bonus as a token of appreciation.

Tools and Techniques: C++(Main language), C#, Visual Studio, Frostbite Engine, FrostEd, Alembic

Education

2008 - 2015(expected) International Game Architecture and Design – Programming (2.1)

NHTV University of Applied Science – Breda, The Netherlands

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| Modules include: Software Architecture (A) | Graphics (B) | Mathematics (B) |
| Optimisation (B) | Procedural Programming (A) | Gamelab (A) |
| Console development (A) | Multi-threading (B) | Rapid Prototyping (B) |
| Game Design (B) | Advanced Game Tech (C) | Network Technology (A) W |
| Tools and Techniques (B) | Work Placement (A+) | |

* Grades converted using www.studyinholland.com conversion table.

2001 - 2006 HAVO (A-Levels equivalent)

Christelijk Lyceum Zeist - Zeist, The Netherlands

Main subjects: Physics, Chemistry, Mathematics

2003 Cambridge Certificate in Advanced English

Skills

Advanced skills:

- **C++**
STL, Visual Studio, Xcode, familiarity with C++11, Unreal4,
- **C# & Unity**
Reflection, Generics, LINQ, Mono/Xamarin, Visual Studio, Unity 4
- **Game-play programming**
I have worked on multiple student games, including two award winning games, Chewy and Sumo Salad. Additionally I worked as game programmer on the indie game Terraria.
- **Graphics programming**
OpenGL, Shaders, CUDA, Software Rasterizer.
- **Optimizing and Multi-threading**
Profiling, SIMD, Assembler and industry experience from internship at *DICE*.
- **Object oriented programming**
University courses and experience with designing and implementing OO systems at *DICE* and *Indicia*.

Intermediate skills:

- Unreal Engine 4
- CUDA
- Xcode
- Lua
- Data oriented programming
- Console programming (PSP, PS3)
- Agile and Scrum
- 3D mathematics
- Box2D

Basic skills:

- Java
 - PHP & MySQL
 - DirectX11(.1)
 - Raytracing
 - Nvidia Physics/ ODE Physics
 - Oculus Rift
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Hobbies and interests:

Game-jams: Game jams are a great way of trying out new concepts and learning new technologies such as the Oculus Rift and Unity3D. It is a great way to have fun with friends while building something. We even won a couple of prizes.

Games: Mostly strategy games. I also play Super Smash competitively.