

David “Rez” Graham
rezination@gmail.com

C: 925-207-3161
www.bleachkitty.com

1932 California St
Berkeley, CA 94703

Skills:

Programming Languages & Markup Languages	C/C++, Assembly Language (x86 & 6502), Lua, C#, Perl, Python, HLSL, SQL, XML
API's	DirectX, STL, Gamebryo, Renderware, BigWorld, Scaleform, FMOD, Win32, .NET
Platforms	Windows (95/98/ME/2K/XP/Vista/7), Wii, Playstation 3, Gameboy DS, iPhone/iPad, Various flavors of Unix
Development Software	Microsoft Visual Studio (4.0 – 2010), GCC, Radix, Code Warrior, Xcode, Wing, ProDG Debugger for Playstation 3, SN Tuner for Playstation 3, nVidia PerfHud, Perforce, CVS, SVN, Alienbrain
Game Credits	The Sims Medieval (PC/Mac) Wedding Dash (iPhone) Diner Dash: Grillin' Green (iPad) Drawn to Life: The Next Chapter (Wii) Brain Quest, grades 3 & 4 (DS) Brain Quest, grades 5 & 6 (DS) Rat Race (PS3) Barbie Diaries: High School Mystery (PC) Sim City 3000 (PC)

Professional Experience:

Software Engineer III; August 2010 – Present

Electronic Arts (Sims Division); Redwood City, CA

- Worked on AI systems
- Helped take the open, sandbox game of Sims 3 and allow Sims to be controlled by designers for quests, work, etc. while still retaining the look & feel of a sandbox game
- Worked on system for bringing in background Sims to fill out the kingdom
- Wrote various “Stay” and “Evict” interactions to keep sims at the appropriate areas or evict them from the world when it got too full
- Worked on a number of new sleep & bed features
- Wrote a number of new traits
- Worked on the Sim creation & destruction code and the glue between the C++ engine code and the C# gameplay code
- Fixed numerous memory leaks
- Helped optimize the AI code

Senior Software Engineer; January 2010 – August 2010

PlayFirst; San Francisco, CA

- Wedding Dash: (iPhone)
 - Served as Lead Programmer
 - Took a scaled-down version of a PC game and adjusted the aspect ratio, reimplemented all the graphics, and refactored many of the core systems to make it more native to the iPhone.
 - Updated game to support iPhone 4, including support for 960x640 resolution.
- Diner Dash: Grilling Green (iPad)

- Wrote various gesture recognizers for multi-touch gestures.
- Wrote many of the gameplay features, such as ordering food, cooking, and serving.

Programmer; June 2009 – Dec 2009

Slipgate Ironworks; San Mateo, CA

- Integrated Scaleform 3.0 and wrote an abstract interface for communication between the flash layer and the game layer.
- Wrote system for creating and displaying plaques (aka billboards) in the world, which could be textured using a flash movie.
- Worked on back-end infrastructure to allow Flash mini-games to be easily created and dropped into the core game.

Programmer; April 2008 – March 2009

Planet Moon Studios; San Francisco, CA

- Drawn to Life: The Next Chapter (Wii):
 - Designed and built the Artificial Intelligence system from the ground up.
 - Integrated all enemies & NPC's into the game.
 - Wrote the system for saving and loading the game.
 - Kept a running tab of all anticipated lot check issues in preparation for certification.
- Brain Quest (DS):
 - Wrote the achievements system
 - Helped write the sticker book and sticker dioramas.
 - Wrote the Sudoku game.

Co-Author of Game Coding Complete, 3rd Edition, published by Charles River Media

- Wrote Chapter 17: An Introduction to Game AI.
- Wrote a sample path finding system using A*.
- Wrote a simple state machine for AI states.
- Touched upon various advanced AI topics, such as Decision Trees, Utility-Based AI, Fuzzy Logic, and more.

Software Engineer; December 2005 – April 2008

Super-Ego Games; San Francisco, CA

- Wrote various subsystems from scratch including the mini-map, the input system, the camera manager, the wardrobe, the bonus buck system, and various others.
- Took over the existing AI and pathing systems.
- Created a friendship matrix which added depth and realism to the AI.
- Ran the game through SN Tuner and Visual Studio Team Suite's profiler to find and correct performance bottlenecks.
- Helped write the hardware abstraction layer to switch from PC to Playstation 3.
- Helped move off of the Renderware engine and onto the Gamebryo engine.
- Took over the Lua integration.
- Implemented many of the mini-games and worked closely with the designers to ensure their vision was properly executed.
- Touched every aspect of the game engine at one time or another.

Technical Support Engineer; April, 2005 – November 2005

Success Factors; San Mateo, CA

- Wrote several programs to automate tasks within the Customer Success team.
- Created custom SQL scripts to fix customer data issues.
- Updated XML templates to customize the look & feel of various forms and components.
- Wrote several small Java apps to fix low-level issues with the form objects.

Customer Experience Analyst Manager; April 2000 – February 2005

Ofoto, Inc. (subsidiary of Kodak); Emeryville, CA

- Managed a team whose primary responsibilities included: administrating all the Customer Service systems, performing all operational reporting, and any other duties that didn't have a clear owner.
- Designed and wrote several tools for Customer Service and the Lab including: a returns and refunds database, a customer contact logging tool, a searchable coupon and promotions database, a callback tracker, a representative quality assurance tool, a simple file encryption program, a URL string parser, and an ASCII translator (to replace all Win32-specific characters in a selection of text with standard ASCII characters).

Technical Support; April, 1999 – December 1999

Microprose; Alameda, CA

- Acted as liaison to provide the Customer Support perspective to Product Development.
- Worked directly with the Lead Designer of Master of Magic to provide insight and learn about the process of creating a game.
- Handled incoming calls and emails regarding Microprose products.

Quality Assurance; August, 1998 – March 1999

Maxis; Walnut Creek, CA

- Tested Sim City 3000 and logged all deficiencies.
- Ran the game in the debugger to catch crashes and sent the relevant information to the engineers for quick resolution.
- Helped with the debugging process by setting break points, tracing through code, etc.

Personal Experience:

- Gave two speeches at the Game Developer's Conference during the AI Summit in 2011
 - The first speech detailed the AI tools we used on The Sims Medieval and how they helped us
 - The second speech talked about how we went from sandbox AI of The Sims 3 to the more directed approach of The Sims Medieval.
- In the process of building a small, fully autonomous robot.
- Bleach Engine:
 - Wrote a fully featured, highly modularized 2D game engine from scratch.
 - Uses Direct 3D with a fixed camera position and multithreaded renderer
 - Abstract Entity/property component system.
 - Complex streaming tile system, allowing for huge open worlds
 - Multithreaded Resource Manager with cache prediction/flushing.
 - Simple Shader system (uses HLSL).
 - Lua scripting integration.
 - Efficient collision system using Quadtrees.
 - Abstract logging system, complete with console to allow Lua input and debug dumps
- Steph in Dreamland:
 - <http://www.bleachkitty.com/PersonalGames/StephInDreamland/>
- AI swarm tech demo (there's a good story behind this one):
 - <http://www.bleachkitty.com/downloads/apps/swarm.zip>
- Farmer Bill's Almond Farm (my first game ever, written when I was 16):
 - <http://www.bleachkitty.com/PersonalGames/FarmerBill/>

Education:

Associate of Applied Science in Electronics & Computers Technology

Heald Institute of Technology; Martinez, CA

Graduated July 1998