

Matthew Bozarth

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Technical Skills

Programming Languages:	C++, C#, Ruby, Lua, Java, Scheme
Graphical Libraries:	DirectX 10, OpenGL, XNA Game Studio
Development Software	Visual Studio IDE, Eclipse IDE, Subversion, 3ds Max
Web Technologies:	HTML, CSS, XML, Ruby on Rails, PHP, MySQL
Operating Systems:	Windows XP/Vista/Win7, Linux
Expertise:	Game engine, render pipeline, scripting integration

Experience

Ben10: Ultimate Alien

Cars: Mater's Memories - Papaya Studios - Junior Engineer Nov 09 – Apr 2010
Implemented new engine features, improved content pipeline, and added gameplay features for designers as well as working on and fixing complex systems already in place. Development was done in C++ for the following platforms: PC, Xbox 360, Playstation 3, and Wii.

Darksiders - Technicolor Interactive Services/THQ - Junior Engineer Jun-Aug 2009
Worked with 3ds Max animation files and the client's proprietary game engine to ensure compatibility between them for in-game cinematics for the game *Darksiders* which came out for Xbox 360 and Playstation 3 in January 2010.

Tank Frenzy – RIT Capstone Project 2008-09
Tank Frenzy is a cooperative tank combat game that allows one to four people to explore an open world and complete objectives.

As the final game project for my two-year master's program, this game showcases the abilities of our team. It integrates an open world, multiplayer, cooperative game design utilizing sophisticated AI, a deferred renderer, multi-threading, and an integrated scripting system; all as part of our custom built engine. My contributions:

- Architected the rendering pipeline
- Designed a scene management system to accommodate animation, collisions, and batching
- Implementing a deferred renderer to support dynamic lighting
- Integrating Lua with C++ to provide an interactive, in-game console

Prior to the final development phase: design, gameplay prototyping, treatment document write-up, green-light pitching, technical documentation, personal research proposals, art bible, and development scheduling.

Army Ants – RIT 2008
Army Ants is a four player, turn-based, platform shooter integrating destructible terrain with a run and gun style of gameplay and a puzzle aspect requiring players to plan ahead.

Developed *Army Ants* over ten weeks with a team of five people. Responsibilities included: concept design, core engine, graphics pipeline, and gameplay code. *Army Ants* was developed in C++ and DirectX 10 and used Nvidia's PhysX library to implement destructible terrain rendered using metaballs.

- Architected the core engine and rendering pipeline
- Implemented the rendering pipeline
- Helped design and balance gameplay

TimeSlip - Ratatoskr Entertainment 2008
Led a team in developing a space racing game for Xbox Live Arcade over twelve weeks with a crew of ten people. Designed and implemented several key features including: route planning, Xbox-PC-Zune networking proof of concept, and solar system management. Made contributions in:

production, gameplay design, campaign design, and art technology. Implementation was done in C# and XNA for the Xbox 360.

- Managed a team of five developers
- Designed a variety of systems and led the development
- Contributed to scheduling, project management, and feasibility testing

Warship Armada - RIT 2008

Warship Armada is a four player pirate ship game that allows players to destroy each other as they try to navigate the seas and race to complete a series of checkpoints.

This game was developed over the course of seven weeks with a team of six people. *Warship Armada* was developed in C++ and DirectX 10 for PC, taking advantage of new DirectX 10 features such as geometry shading. Responsibilities included: lead design, core engine, graphics pipeline, HLSL shader programming, Lua integration, and gameplay programming.

- Architected the engine and rendering pipeline
- Designed the core gameplay mechanic and pacing
- Researched DirectX 10 and geometry shader technologies

Graduate Assistant – RIT 2008

Assisted in classroom and tutored individual students on a variety of undergraduate topics including: Java, C#, XNA Game Studio Express, web design, PHP, Flash, HTML, and CSS.

Web Development Contractor - THQ 2007 –08

Designed and built a file transfer site to allow developers to share media with clients faster and more easily. Design requirements involved dealing with a variety of media types, scalable use, and easy interaction with an emphasis on developer/client interaction.

Technologies: Ruby on Rails and MySQL.

Contract Web Development - Orly International 2006 –07

Designed and built a back-end for SpaRitual.com. Special design requirements to allow the site to be easily localized resulted in a robust interface for administrative data translation.

Technologies: Ruby on Rails and MySQL.

Web Development Internship - Fonogenic 2006

Designed and developed a web-based management system for professional musicians. Worked with the client to develop a solid back-end database, intuitive user flow, and front-end interface to be developed in Flash.

Technologies: Ruby on Rails and MySQL.

Tools Development - Haverly Systems Inc 2005

Designed and developed a web solution for managing company-wide client contact information.

Technologies: PHP, Microsoft SQL Server, and XHTML.

Reference: Victor Haverly, Vice President, Victor@Haverly.com

Education

M.S. Game Design & Development, May 2009 3.81/4.0 GPA

Rochester Institute of Technology
Rochester, NY

B.S. Computer Science, May 2007 3.44/4.0 GPA (major)

Rose-Hulman Institute of Technology 3.10/4.0 GPA (overall)
Terre Haute, IN

Links

Resume, One Page Portfolio, Sample Code:
<http://matthewbozarth.com/resume>