SARAH HERZOG

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Statement

I am a motivated, responsible, charismatic game programmer seeking a position where I can stretch my current abilities and learn new skills.

Though relatively new to the gaming industry, I bring a wealth of life experiences to the table. Travel, a career in chemical engineering, and various teaching and freelance positions provide a unique background that is an asset to any creative endeavor. I am also highly focused on game programming and development, pursuing a degree at one of the most prestigious gaming universities in the world, University of Abertay.

I have shown myself to be hard working, imaginative, collaborative, and eager to learn throughout my university and work experiences. In short, I am an individual with a diverse skill set and strong technical background who is genuinely fascinated by games.

Skills

Languages

Through my various hobby and university projects, I have become proficient with C++, Java, C#, JavaScript, Action Script 3, and Lua. With a solid background in traditional computer science from Portland State University, I am familiar with most data structures and algorithms, as well as various design patterns.

Tools

At Portland State University, I learned programming and debugging on multiple platforms including Windows and Linux, using IDEs such as Visual Studio and Eclipse. I also compiled and debugged using command line interfaces including gcc/g++, gdb, and Valgrind. This experience served me well at Intel, where the smart TV integrated systems used only Linux command line.

While volunteering at wow-pro.com, I learned and utilized version control through Git, and managed a remote repository (using GitHub.com) for a global team. I continue to use these tools for both university and personal projects.

I have also gained experience with several game libraries and engines including Allegro, DirectX, XNA, Flat Red Ball, Unity, and Havok.

Teamwork and Leadership

I participated in many group projects throughout my time at university, both as a leader and team member. At wow-pro.com I led a team of international volunteers, many of which had no technical expertise, to develop a highly successful addon. A small team of fellow interns and I created several tools to improve the Intel smart TV QA process. I have also worked in game development teams at Abertay and in the Scottish Game Jam.

Communication

As a hobby, I maintain a blog covering various aspects of the gaming industry from a gamer and game developer perspective. I also wrote, recorded, and voiced an informational video advertising the wow-pro.com addon. This experience in educating and entertaining served me well as a science teacher, where I kept up to 20 primary school children engaged and interested for hours at a time.

On a more technical side, I co-authored an official report for a National Science Foundation grant while working as a researcher in the field of engineering education at Oregon State University. I have also been called upon multiple times to relate results and projects to non-technical audiences, both in writing and as presentations.

Awards

Scottish Saltire Scholarship: £2,000, awarded to 200 international students to study in Scotland.

Abertay Academic Excellence Award: £3,000, awarded to those who have academic merit significantly above the normal requirement for the chosen degree program.

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Projects

Racing Game Fuzzy Logic Controller Tuned With Genetic Algorithms

Web location: https://github.com/Jiyambi/Portfolio/wiki/Fuzzy-Logic-Controller-with-Genetic-Algorithms
This JavaScript and HTML5 project was completed for an artificial intelligence module at Abertay University. The program demonstrates the use of a fuzzy inference system to control a car in a racing game. The application allows for full customisation of the controller settings, including membership functions and rules. The final section of the application explores the tuning of a fuzzy controller using genetic algorithms.

DirectX Sample Scene – Solar System Exploration

Web location: https://github.com/Jiyambi/Portfolio/wiki/DirectX-Sample-Scene---Solar-System-Exploration
This C++ project demonstrates features of DirectX 11. It was created for two coursework modules at Abertay University, simulating a solar system with various spheres orbiting about the sun. The scene showcases features including: 2D overlays; in-scene point lighting; a particle system; skybox; text FPS and CPU usage display; Direct Input camera controls; and Direct Sound music and sound effects. This project is still under development, and will soon incorporate procedurally generated terrain for exploring planet surfaces.

Work

7/2011 – 8/2012 | Quality Assurance Intern | Intel, Hillsboro OR

At Intel I was part of the quality assurance team responsible for testing the Intel smart TV Flash plugin. During my time there I became proficient in device set up, testing operation, and results reporting. I trained several new employees and helped develop multiple tools to streamline the process and improve team efficiency. Our efforts resulted in official Adobe certification for our platform.

4/2010 – 12/2010 | Lead Addon Developer | www.wow-pro.com

Wow-pro.com, a popular fan website for World of Warcraft, tasked me with the development of an addon which would bring their strategy guides directly into the game. I led an extensive, globe-spanning team of volunteers in the endeavor, resulting in a massively popular addon with over 200,000 downloads to date. Our product was recommended by several high profile websites within the WoW community, including WoW Insider (wow.joystiq.com). I also created a simplified language and Lua-based interpreter, as well as a companion guide recording addon, to allow non-experts to create content.

1/2010 – 9/2010 | Science Instructor | Mad Science, Seattle WA
6/2008 – 12/2008 | Engineering R&D Intern | ATI Wah Chang, Albany OR
9/2007 – 6/2008 | Engineering Education Research | OSU Chemical Engineering
4/2007 – 9/2007 | Facilities Engineering Intern | ON Semiconductor, Gresham OR
7/2006 – 11/2007 | Computer Technician | OSU Technology Support Services

Though not directly related to the gaming industry, my previous career gave me many valuable life experiences. At many of the companies I worked for I had a vital effect which changed them for the better, such as adding a new stage to the production process at Wah Chang, and implementing a piping change saving ON Semiconductor $10,000 yearly. I gained familiarity with high responsibility situations, such as handling hazardous chemicals and operating powerful machinery. Finally, I gained experience presenting results, troubleshooting, and customer service – valuable skills in any industry.

Education

University of Abertay 2014 – MSc Computer Games Technology – *In Progress*

Dissertation in the field of artificial intelligence

Portland State University 2012 – Advanced Degree Preparation (Computer Science)

Additional Coursework in Visual Design and Music

Oregon State University 2009 – BSc Chemical Engineering, *Cum Laude*

Additional Coursework in Business Law, Marketing, and Entrepreneurship