

# SARAH HERZOG

github.com/Jiyambi/Portfolio | 07936 434640 | sarah.ann.herzog@gmail.com

## Statement

A motivated, responsible, charismatic game programmer able to integrate well with a team and learn quickly and efficiently.

Brings a wealth of life experiences to the table, including travel, a previous career in chemical engineering, and various teaching and freelance positions. Pursuing a post-graduate degree at one of the most prestigious gaming universities in the world, University of Abertay. Technical focus on artificial intelligence.

Hard working, imaginative, collaborative, and eager to learn. In short, an individual with a diverse skill set and strong technical background who is genuinely fascinated by games.

## Skills

### Programming

- ◆ Proficient with C++, Java, C#, JavaScript, Action Script 3, and Lua.
- ◆ Familiar with many data structures and algorithms, as well as various design patterns.
- ◆ Well versed with various AI techniques including pattern movement, finite state machines, fuzzy logic, and genetic algorithms.

### Development Tools

- ◆ Familiar with IDEs such as Visual Studio and Eclipse, as well as command line compiling and debugging interfaces including g++, gdb, and Valgrind.
- ◆ Proficient in version control using SVN and Git. Experienced in managing remote repositories for group work via github.com.
- ◆ Experienced with multiple libraries and game engines including Allegro, DirectX, XNA, Flat Red Ball, Unity, and Havok.

### Teamwork and Leadership

- ◆ Participated in many group projects at university, both as a leader and as a team member.
- ◆ At wow-pro.com, lead an international development team of volunteers.
- ◆ Team of fellow interns created several tools to improve the Intel smart TV quality assurance process.
- ◆ Programmed in game development teams at Abertay University and in the Scottish Game Jam.
- ◆ Currently leading a team to develop a mobile game as part of the Abertay Game Development Society.

### Communication

- ◆ Maintain a daily gaming industry blog.
- ◆ Wrote, recorded, and voiced an informational video advertising the wow-pro.com addon.
- ◆ Taught after school science classes for primary school children.
- ◆ Co-authored official report for a National Science Foundation educational grant.
- ◆ Experienced in relating technical knowledge to non-technical audiences, both as writing and in presentations.

## Education

### University of Abertay 2014 – MSc Computer Games Technology – *In Progress, Feb. 2014 Graduation*

Dissertation in the field of artificial intelligence

### Portland State University, USA, 2012 – Computer Science Advanced Degree Preparation

Additional Coursework in Visual Design and Music

### Oregon State University, USA, 2009 – BSc Chemical Engineering, *Cum Laude (First Class Hons)*

Additional Coursework in Business Law, Marketing, and Entrepreneurship

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## 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.

## 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 demonstrates the use of a fuzzy inference system to control a car in a racing game. It allows 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 familiarity with various features of DirectX 11. It simulates a solar system with various spheres orbiting about the sun. The scene showcases 3D models, 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.

## Work

**07/2011 – 08/2012 | Quality Assurance Intern | Intel, Hillsboro OR, USA**

Member of the quality assurance team responsible for testing the Intel smart TV Flash plugin. Basic responsibilities included device set up, test operation, and results reporting. Trained new employees.

Developed multiple tools to streamline the QA process and improve team efficiency. Team efforts resulted in official Adobe certification for the Intel smart TV platform.

**04/2010 – 12/2010 | Lead Addon Developer | www.wow-pro.com, International**

Led an extensive, globe-spanning team of volunteers in the development of a World of Warcraft addon which brought wow-pro.com strategy guides directly into the game. Created a simplified language and Lua-based interpreter, as well as a companion guide recording addon, to allow non-experts to create content. Resulting addon was massively popular, with over 200,000 downloads to date. The product was recommended by several high profile websites within the WoW community, including WoW Insider (wow.joystiq.com).

**01/2010 – 09/2010 | Science Instructor | Mad Science, Seattle WA, USA**

**06/2008 – 12/2008 | Engineering R&D Intern | ATI Wah Chang, Albany OR, USA**

**09/2007 – 06/2008 | Engineering Education Research | OSU Chemical Engineering, USA**

**04/2007 – 09/2007 | Facilities Engineering Intern | ON Semiconductor, Gresham OR, USA**

**07/2006 – 11/2007 | Computer Technician | OSU Technology Support Services, USA**

Previous career resulted in many valuable life experiences. Provided huge benefits to previous employers, including the addition of a new stage to the production process at Wah Chang, and the implementation of a piping change saving ON Semiconductor \$10,000 yearly. Gained familiarity with high responsibility situations, such as handling hazardous chemicals and operating powerful machinery. Gained experience presenting results, troubleshooting, and providing customer service.

## References

### Academic

Dr. David King | d.king@abertay.ac.uk | Director of Academic Programmes, SECAM, Abertay University

### Professional

Mr. Charley Faivre | faivre.charley@gmail.com | Owner, Administrator of wow-pro.com

Mr. Christopher Sauvageau | christopher.sauvageau@intel.com | QA Manager, Intel