

# Resume

## Joshua Stewart

### Personal Information

DOB: September 11<sup>th</sup>, 1980  
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### Career Objectives

I am a creative software developer with a passion for solving problems, and as such I desire a challenging technical position at a dynamic software company where I can use my experience with large software systems development and interactive computer graphics to bring products from conception to delivery.

### Academic Qualifications

2005 – 2007 Postgraduate Diploma in Games Technology (82% Avg.)  
Murdoch University

1999 – 2002 Bachelor of Science (Computer Science)  
Edith Cowan University

1998 – 1999 Diploma of Information Technology, Central TAFE (1 year)

1998 Certificate III of Software Applications, Hardware and Network Fundamentals, Central TAFE.

### Relevant Work History

#### Immersive Technologies

**Software Engineer** Full-time June 2006 – Present  
Commercial software development with the world leader in mining simulation software

- Software Enhancement & Support team
  - Release lead for Meekatharra project
  - Resolving software issues across entire codebase
  - New software features developed across entire codebase
  - Responsible for Software Support Requests from Customer Support and associated KPI's
- Graphics Engine team
  - Prototyping / Evaluation of 3rd party graphics engines (Ogre3D)
  - DX8 to DX9 porting
  - Implementing new graphics features
  - Refactoring legacy DX9 engine to decouple it as a reusable component for use in other products
- Courses: In-house leadership training, (AIM) New Supervisor Course, (AIM) Interpersonal Relationships Course

#### Raytheon Australia

**Experienced Software Engineer** Full-time July 2003 – May 2006

Full lifecycle product development from systems requirements analysis, software requirements analysis, software design, implementation, integration and testing. Defence clearance.

- Lead developer for real-time embedded vxWorks systems development
- C, C++, ADA, Java
- Software / Hardware integration
- R&D mentor for research students in AI & CG development
- Large real-time software systems development experience
- Promoted to 'Experienced Software Engineer' in August 2005

### **Edith Cowan University**

Professional Development Computer Support	Casual	Feb 2003 – July 2003
Computer Support Officer	Part-time	Mar 2002 – Nov 2002

### **Work Experience**

Sanford / Nemus – Analyst Programmer	Full-time	May 2003
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### **Volunteer Positions**

Bur.st Networking Inc – Chairman	Mar 2003 – Present
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## **University Projects**

### **AStar - Team Leader (postgraduate)**

I led a team of up to 3 other students to develop 3 major assignments over 3 semesters, including:

- Library Simulation – Developed a 3D simulation of a library environment, without using 3rd party AI or Physics libraries.
- Rebel Conflict – A game engine and 3D strategy game
- Shinobyl – A polished dynamic platform adventure game

A detailed summary of the development of these projects is available here

<http://astar.bur.st/projects.html>

**Roles:** *Team Lead, Design & Programming*

**Achievement:** *High Distinction*

### **3D Game Engine (postgraduate)**

I constructed a basic 3D game engine, with features including:

XML driven level data (objects, lights, items) • Frustum Culling • Height-mapped Terrain • OBB collision detection • Timer driven animation • Milkshape3D model loader supporting collision meshes • 2D Text console system.

It was developed using OO/C++ with OpenGL in Microsoft Visual Studio .NET

**Achievement:** *High Distinction*

*Source, demo and documentation available from*

[http://aek.bur.st/world\\_demo/](http://aek.bur.st/world_demo/)

### **Ball Physics Demo (postgraduate)**

I constructed a 3D graphics application, which demonstrates ball collision detection and response in 3D space using physics modelling. It includes animation, user interactivity, and behaviour modelling. It was developed using the cross-platform GLUT library using C and OpenGL in Microsoft Visual Studio .NET.

**Achievement:** **High Distinction**  
Source, demo and documentation available from  
[http://aek.bur.st/ball\\_demo/](http://aek.bur.st/ball_demo/)

### **Final Year Project: Game for Scitech**

For my final year undergraduate project, myself and three others successfully developed an interactive game for the Scitech Discovery Centre. It was a 2D game developed in C++ using DirectX. Major areas I worked on include game design & framework, user input, game logic, project management.

**Roles:** **Project Lead, Design & Programming**  
**Achievement:** **Game featured on the Scitech website**  
<http://aek.bur.st/goldrush/>

## **Demonstrated Skills and Abilities**

### **Technical Skills**

**Programming Languages:** C (7 years), C++ (6 years), C# (2 years), ADA (2 years), Java (1 year)

#### **Development Environments:**

MS Windows (Visual Studio)  
Linux (Eclipse & NetBeans)  
Solaris (Rational Apex)  
Wind River VxWorks (Tomado)  
DOS (DJGPP/TurboC)

**Other Libraries & Tools:** OpenGL, DirectX, Design Patterns, Ogre3D, .NET, STL, XLib, Serial Comms, Milkshape3D, 3DSMax, Paintshop.

**General:** MS Windows, MS Office, Linux, Solaris, TCP/IP, relational database design, CVS / SVN / PVCS (version control), 2D & 3D computer graphics programming concepts, JIRA / TRAC (issue tracking).

**Hardware:** Dy4 SVME 179, VMetro Bus Analyser, UMI RTX, VME

### **Team Leadership**

I actively seek leadership / mentoring roles at work and university as I enjoy this challenge.

- **Meekatharra Release Lead** – Leading a team of software engineers and software testers on the Meekatharra project. Successfully completed a 3 iteration development phase on schedule with all requirements satisfied. Currently in testing phase of project with a beta due for release to customers at the end of August.
- **Team Leader AStar** – Selecting and managing a number of tools and systems to facilitate collaborative development between the team over the internet. First team in Murdoch Games Technology course to establish version control and issue tracking tools (SVN / TRAC). Lead team to HD results.
- **Project Leader Scitech Project Team** - Duties included organising weekly meetings and reports, documentation management, change and version control issues, client communications and project scheduling. Lead team to HD results.

## **Communication Skills**

I am an excellent communicator who is happy presenting information, discussing technical ideas with my peers, reporting to management and meeting with customers.

- **Enhancement & Support Team** - Management and processing of Software Support Requests requiring interaction with many different stakeholders such as Customer Support, Visual Database and Product Management departments.
- **Release Lead for Meekatharra Project** – Development of project mandates including requirements analysis and project estimation, in cooperation with Products Management. Preparation and running iteration start-up and closeout meetings.
- **Lead Developer for SSMADS (legacy combat system) Project** – Involved with the analysis and development of the system and software level requirements for the project, which required effective communication with the rest of the team.

During software development, driver issues for 3<sup>rd</sup> party hardware components required that I communicate technical information to the hardware vendor's software team, to assist them in resolving the problem.

During the hardware/software integration phase, obscure hardware configuration issues were characterised and analysed by me. I was able to effectively communicate technical data and test results about the system behaviour to the hardware manufacturer to work out a solution to the issue.

- **Spokesman for Scitech Project** - Liaised with the client and project co-ordinator at all meetings and via email. Successfully interpreted the client's needs, pitched the team's idea's and presented the client with progress updates and demo's. As project manager I also had to keep the team communicating effectively for the year.
- **Lead Programmer Robotics Project** - Directed other programmers in the team to work more effectively by documenting coding standards and version control processes, reviewing code submissions. Quality of code submissions increased dramatically after reviewing submissions with team members, and giving them some feedback regarding quality.

## **Referees**

Referees and reference letters are available upon request.