

Stuart William Coulson

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PERSONAL PROFILE

A recent graduate with two masters degrees including a distinction in Computer Games Technology from Abertay Dundee, looking for programmer position within a games development studio, particularly within the area of AI. Possessing of a broad range of technical, mathematical and problem solving abilities, with strong proficiency in C/C++ and Java programming. Having worked for the Blanchland Community Development Organisation Ltd and on group projects during my degrees have gained superb teamwork, organisational and communication skills. Quick learner and keen to work in the games industry, with the goal of becoming a lead AI programmer on a big budget title.

EDUCATION

University of Abertay Dundee, Dundee, Scotland September 2007 – December 2008

MSc Software Engineering (Computer Games Technology) Result - Distinction
Course expanded on previous knowledge, specialising in topics directly related to computer games development. Subjects covered include Game Physics, 3D mathematical techniques, Artificial Intelligence, DirectX programming, Console development and background on how the industry is structured and the issues it faces.

Research Project: "Investigation into using online evolutionary techniques to dynamically control Artificial Intelligence difficulty in games"

Implemented a number of evolutionary algorithms using Java that bred AI behaviours and integrated these into the Robocode game environment. Designed and carried out a set of experiments to evaluate the success of each technique.

University of York, York, England October 2002 – June 2006

MEng Computer Systems and Software Engineering Result - 2:1 (Hons)
Modules taken include Logic Programming and Artificial Intelligence, AI for Games, Adaptive and Learning Agents, Computer Graphics and Visualisation, Real-time systems, Algorithms and Data Structures and Mathematics for Computer Science. The course also involved a number of team-based projects that involved working in groups to solve engineering problems in collaboration with industry.

Research Project: "Animation of Sorting Algorithms using the Lego Mindstorms System"

Constructed a robot using the Mindstorms system capable of identifying and moving coloured objects. Developed a set of programs in C/C++ to control the robot so that it would order the set of objects according to one of a number of sort algorithms.

Prudhoe Community High School, Northumberland, England September 1997 – July 2002

GCE Advanced Level

Mathematics (Grade A), Physics (Grade A), Geography (Grade A), Chemistry (Grade B)

GCSE Level

11 awards Grades A* - B including Mathematics, Statistics, Science and English

TECHNICAL EXPERIENCE

(**Bold** indicates good working knowledge)

Programming Languages: C/C++, **Java**, C#, Prolog, XML/XHTML/HTML/CSS, ActionScript, PHP, MySQL, Scheme, Assembly Language, Linux Shell Script

APIs and Software: **Microsoft DirectX**, **Microsoft Visual Studio**, **Microsoft XNA**, OpenGL, Ageia PhysX, Ogre3D, GNU Compiler Collection, Adobe Flash, **Microsoft Office**

Hardware: **PC (Windows and Linux)**, **Playstation 2 (Linux)**, Xbox, Lego Mindstorm RCX, ZiLOG Z80

PROFESSIONAL EXPERIENCE

Blanchland Community Development Organisation Ltd., Blanchland, Northumberland
Web developer & administrator November 2006 – December 2008
Solely responsible for creating and maintaining a website to promote the village of Blanchland and its surroundings. Was also the first point of contact for the public and other businesses on issues relating to the website and tourism in general. Work achieved great success as site currently receives over 1000 hits a month. Gained experience developing Flash, PHP and other web-based programs. Further developed communication and organisational skills.

Prudhoe Community High School, Northumberland, England
Database application developer June 2003
Tasked to develop a student database. Used communication skills to discuss requirements with the client, organisation skills to ensure the project was completed within the time available and problem solving to identify a method of completing the project using existing technology so as to minimise time and costs.

KEY SKILLS

AI Knowledge

Within both of my degrees have studied and implemented a variety of AI techniques of both an academic and game-specific nature. Areas of knowledge include A* pathfinding, rule-based systems, finite state machines, steering behaviour, artificial life, natural language processing and evolutionary algorithms.

Problem Solving

Given the nature of my degrees, the vast majority of work involved problem solving to some extent, i.e. being presented with a set of requirements and having to engineer a final solution. As such have considerable experience in this area. Two major examples during my first degree involved working with teams on real-life problems presented by large companies including Thales UK and Norwich Union/Orange. In both cases devised solutions which the companies praised highly.

Communication & Teamwork

Through general study and my work with the Blanchland Community Development Organisation dealing with queries, have acquired strong written and verbal communication skills. Working on group projects, such as the examples mentioned previously, has helped me develop the listening and negotiating skills needed to effectively work as part of a team.

Organisational Skills

Having carried out a large amount of course work, including two dissertations, have developed the skills needed to ensure that all the work required gets done within the deadlines set. These include identifying important targets, prioritising workload and the ability to manage time effectively.

ADDITIONAL INFORMATION

Qualifications & Awards

Association of Certified IT Professionals Diploma in Web Design (Distinction - Completed May 2007);
European Computer Drivers License (2001);
UKMT Intermediate Maths Challenge Awards (1998 - Bronze, 1999 - Bronze, 2000 - Silver);
UKMT Senior Maths Challenge Award (2000 - Bronze);

Spoken Languages

German (GCSE Level Grade A)

HOBBIES AND INTERESTS

Am an avid computer gamer with an interest in all types of games especially racing, adventure and retro titles. Regularly visit the cinema and was a member of the York Student Cinema helping to put on screenings. Also enjoy reading fiction books, cycling and am a fan of Motorsport.

REFERENCES

Available on request