DALE WHINHAM

Student of Computer Science, Newcastle University

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PROFILE

A highly-motivated, passionate and inquisitive programmer, electronics enthusiast and musician. Currently studying for an MSc in Computer Science (Games Engineering).

Formerly an IT Manager at a multi-national aerospace engineering company, I left after 4 years of service to pursue my dream of turning my coding hobby into a successful career in software engineering.

I'm looking to join an enthusiastic and vibrant team so that I can expand my knowledge by learning from the best, and for the opportunity to apply my skills and flexibility in order to contribute to exciting new projects.

RECENT PROJECTS

Screen-Space Ambient Occlusion   available on my portfolio

A C++/OpenGL (and ES) dissertation project completed for my BSc degree, implementing and measuring the performance of the SSAO deferred rendering technique for fast soft-shadows on both desktop and Android platforms.

ARM Mali SDK Code Samples   http://malideveloper.arm.com

A C++ and OpenGL ES native Android code sample, demonstrating how to use multisampled framebuffer objects and render-to-texture to achieve efficient anti-aliasing on the ARM Mali series of mobile GPUs.

MilkyTracker   http://milkytracker.org

I ported this open-source cross-platform music editor to Cocoa (macOS) using Objective-C and OpenGL in order to remove its dependencies on deprecated Mac APIs. This has given me substantial experience in mixing C, C++ and Objective-C together in one project.

I additionally contributed a new CMake-based build system, bugfixes for the app's Mac sound driver (Core Audio), a port of the app from SDL 1.x to SDL 2.x for Linux targets, and set up Travis/AppVeyor continuous integration.

SKILLS

Programming

C ▪ C++ ▪ Java
Objective-C ▪ Some assembly

Visual Studio ▪ Xcode ▪ IntelliJ
Android Studio ▪ Eclipse

Git ▪ CMake ▪ Vim
SSH ▪ Bash/Unix command-line

macOS ▪ Android
Object-oriented programming

Cross-platform development
Cross-compilers ▪ Emscripten

PHP ▪ SQL ▪ HTML5 ▪ CSS
JavaScript ▪ Perl ▪ XAMPP

Libraries and Frameworks

SDL ▪ OpenGL (and ES)
Bullet Physics ▪ Cocoa

Operating Systems

Windows ▪ macOS
Linux ▪ BSD family

ACHIEVEMENTS

HackNE 2014   Hosted at Hancock Museum, Newcastle

Participated in a Hackathon in a team with three other students. Awarded the main prizes from two sponsors (Bloomberg and Bede Gaming) for best use of APIs and for our creative use of hardware (Arduino/LED matrices).

EDUCATION

2013-2017: BSc Computer Science (1st)   Newcastle University

Relevant modules: Games Development (93%), Computer Graphics (86%), Programming for Games (86%), Gaming Simulations (83%), Games Project & Dissertation (83%).

2012-2013: Access to HE Diploma   Newcastle College

Mathematics, Physics, IT - achieved Distinction in all three.

2003-2005: Secondary Education   Dame Allan's Schools, Newcastle

9 GCSE subjects, grades A*-B.
AS-levels in Music Technology (A), ICT (B), English (C).

EMPLOYMENT

2015-2016 (placement year): Intern Software Engineer   ARM Ltd.

Developed code samples for the ARM Mali graphics SDK during a summer internship. Later worked on power management firmware for ARM-based system-on-chips.

2014 (June-August): App Developer   Newcastle University

Designed and implemented an Android app and PHP/MySQL backend to help students receiving support and counselling from the Student Wellbeing Service.

2008-2012: IT Manager   P3Voith Aerospace Ltd.

Responsible for all aspects of IT within the company, including procurement and deployment of hardware and software, and providing one-to-one technical support to employees across three UK offices.

REFERENCES

I would be delighted to provide references on request.

Other Skills

- Ability to take responsibility for tasks and work independently

- Ability to work under pressure and meet deadlines

- Adaptable, flexible, and quick to pick up new development tools and techniques

- Good at problem-solving

- Great team-working and communications skills

- Excellent written English

- Excellent documentation and code-commenting skills, familiar with Doxygen

- Lots of experience with version control (Git), continuous integration, and code review systems (e.g. Gerrit)

- Great debugging skills; familiar with Visual Studio, Xcode and IntelliJ built-in debuggers

- Strong understanding of C/C++ pointers and dynamic memory allocation

- Understanding of multithreading and thread-safety

- A love of graphics and audio-related programming

- A love of "close-to-the-metal" programming; enjoy producing code that directly accesses the hardware or operating system