

Lee Griffiths

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Summary

Recent graduate of Computer Engineering looking for a career as a software developer. Has an aptitude for programming & object orientated design and possess a strong ability to abstract the concepts involved in a given task. Is comfortable working in groups and interacting with other developers and has done so reliably whilst at University. Possess good, thorough debugging skills and the ability to think laterally. A fast learner who has already gained some development experienced and aims to work up to becoming a senior developer heading up a small team in a reputable company. Has studied lower-level topics, including hardware design, in addition to the usual software and database related courses which enabled work to be done at all levels of abstraction with any complications.

Course Modules

Compilers	Concurrency	Distributed Computing
Advanced Computer Graphics	Operating Systems	Algorithms and Data Structures
Digital Design Techniques	Digital Media Processing	Software Engineering
Imperative Programming with C and C++	Understanding Programming Languages	Object Oriented Programming in Java
High Performance Microprocessors	From Transistors to Systems-on-Chip	Enterprise Management for Computer Scientists

Final Year Project

Hand-picked by University staff. Tasked with creating a system which will be used in a new course-module as the base for coursework. Worked in a group with one other student - This was the only allowed joint project of the year. Given a very basic specification with large freedom of design. Only set requirement was that it had to use two specific microcontrollers. Asked to design a complete, working system as well as sketch feasible applications that could be run on it, with a different application being run each year.

Final design was a hardware platform with a rotatable camera. Example application for the platform would be motion detection & automated tracking. Produced 18K word technical report on the project. Unlike other projects this one required an additional handover report documenting the structure and function of the code/system. Gained experience of the full development life-cycle, taking it from a basic spec. to a full working system. The new team has already started to continue the project (application development) based off the reports with no problems.

Technical Skills used in the project

- Developed a basic RTOS for any application's use.
- Developed drivers for both PIC and ARM: Motor control, communication, Character LED, FPGA interface/downloading, basic user-space stack-tracer for debugging.
- Worked with multiple Microprocessors & FPGAs (PIC18s, AT91s).
- Developed the custom build process and tool chain for the project & course-module. Mix of Bash scripting, C programs (Linux) and some ARM assembly.
- Experience with Microchip's MPLAB software for programming & debugging the PIC.
- The project's software is written in C (PIC), some PIC assembly, and ARM assembly in addition to

the tools developed for Linux in C.

Related Academic Projects

- Examples of developed projects, In Java:
 - Simple multi-threaded servers: telnet & ftp, booking servers.
 - Client software to book slots from a server running a booking database.
 - FAT12, process scheduler, virtual memory implementations.
 - MPEG audio encoding software intended for mobile devices.
- Developed an I²C peripheral for an AT91 (ARM7TDMI) in Verilog. Synthesized onto Xilinx Virtex FPGA.
- Developed a basic 16-bit RISC processor in VHDL, only simulated.
- Full custom layout for a ripple carry adder (Cadence)
- Developed a compiler & interpreter for an artificial, C-like language

Education

2008	University of Manchester - School of Computer Science B.Sc. Computer Engineering (Honours), Class 2:1
2005	Cardinal Newman College, Preston A-Levels in Computing (A), Maths (B), Environmental Science (B), General Studies (C), Accounting (D)
2002	St. Bede's High School, Lytham 11 GCSE grade A-C

Employment History

Sep 06 – Feb 08	Bartender & Venue Steward Manchester Academy (University of Manchester Student's Union)
June 07 – Sep 07	Summer Vacation Student APT group, University of Manchester
June 06 – Sep 06	Summer Vacation Student PEVE group, University of Manchester
Oct 02 – Aug 03	Commis Chef The Kingfisher Inn, Kirkham

Technical knowledge & Skills Summary

Languages	Java, C, C++, C#, XHTML + CSS, Bash scripts, MySQL, PHP, Oracle SQL; Assembly: ARM, PIC18, x86; Verilog, VHDL.
Software Tools	Visual C++/C#, Eclipse, Java Netbeans, Dreamweaver, GDB, CVS, GNU/Linux & tools (gcc, grep, sed, bash, make, LaTeX, etc), UML, MPLAB, MATLAB, Cadence, NC-Verilog, Verilog-XL, Quicksim, Mentor Graphics
Misc	Use of practical tools, e.g. Oscilloscopes, Signal Generators etc. Familiar with different development methodologies, e.g. Agile, UP.
Hardware	ARM based microcontrollers (AT91 series), PIC18, Xilinx FPGAs and other specific ICs, eg Video decoder chips. Additionally; Timers, Serial communication peripherals, Motor Control,

LCDs etc.

Misc Skills/Qualifications

- Degree qualifies for BCS and IET membership. Applications pending.
- Awarded a "Millennium Volunteer's Gold Certificate" for over 400 hours of volunteer work. This was primarily with Manchester Nightline between 2005 – 2008. Was "Technical Support Officer" on the committee for 2 years running, (2005 – 2007). Was responsible for making sure the phone lines for the service were fixed should they ever break, keeping the office computer's running and updated, constructed and ran the website, configured the email aliases for committee positions and mailboxes use for society-wide communication. Responsible for aiding the organisation move to a web-based rota system (externally developed).

Interests

- Playing music & musical theory. Played drums for 8 years, taken up bass guitar in the past year.
- Interest in games of all types. Board/computer/card, etc. Both playing and designing.
- Programming, modern gadgetry. Scientific, technological and electronic curiosities etc

Personal Details

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British Nationality
Single

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