

CallumGuthrie

3rd year Computer Science Student

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Programming

Known Languages

♥Java, C/C++, Ruby
SML, Python, Shell
Latex, Prolog

Web Programming

♥PHP, Rails
HTML5, XML
MySQL, CSS3, JSON
Ajax, JavaScript

University

2012 – Present **Bachelor in Computer Science**

Heriot-Watt University, Edinburgh

- The content of my degree has given me the opportunity to construct robust and usable systems. The programme has provided me with a balance of theoretical underpinnings and practical experience.
- Software Engineering: I work as a Software Engineer in a team developing the front and back-end of a wealth management application for financial advisers to control their clients stocks and shares.
- Database Management Systems: Taught me the principles of database management systems and required me to design and implement databases for specific applications and showed me how to integrate databases with application programs.
- Designed multiple MySQL databases following database designs by implementing data requirements, entity relationship diagrams, relational data models, integrity constraints, key constraints and integrity maintenance.
- Web Design and Database: Required me to understand fundamental web design concepts and combine these with database structuring and querying technique using PHP.

Technical Abilities

Java and C

- Experience in using advanced trees, string processing, graphs and hash tables using a variety of libraries.
- Designed several programs in Java such as aeroplane route planners, compilers and data dictionaries.
- Created a variety of programs in C including implementations of threads, pipes and forks.

Python and SML

- Thorough understanding of SML datatypes, pattern matching, recursion and higher-order functions.
- Implemented several search algorithms such as depth first search, breadth first search, uniform cost search and A* search using Python.

MySQL and Raiser's Edge

- Extensive use of Raiser's Edge software. Maintaining and implementing protocols for Children1st charity.
- Created and maintained several MySQL databases including designing a database structure as a relational data model for a tour guide company.
- This required me to implement many processes such as optimisation, query execution, physical database design and develop an interpretation of plans.

HTML5, PHP, CSS3, Ruby on Rails and JavaScript

- Part of a team which designed and implemented a web application using Ruby on Rails following a model view controller architectural pattern.
- Undertaking personal project to create mobile application. This will require implementing MySQL back-end database. The front end will be developed using PHP and HTML5.
- Written a personal web page using HTML5, CSS3 and JavaScript. It includes my weekly blog which allows me to express my passion for upcoming advances in technology. It can be found at www.callumgwguthrie.uk
- Co-founder of a web development company Techni-Cals alongside one of my fellow computer science students. We design a variety of web pages including static, dynamic and e-commerce. We can be found at www.techni-cals.co.uk

Work and Voluntary

February 2015 – Present	Corporate Database Project Volunteer	Children 1st, Edinburgh
October 2011 – Present	Customer Assistant	Marks and Spencer, Livingston
June 2010 – June 2013	Leisure Attendant	Falkirk Council, Callendar Park
August 2010 – March 2011	Service Assistant	Screwfix, Falkirk Branch

Relevant Experience

Corporate Database Project Volunteer

- Extensive use of the fundraising database tool, Raiser's Edge (Blackbaud, Inc.)
- Ensure that the corporate fundraising team has all database records up to date and amend any records where changes have occurred.
- Work on the database project so that historical records are correct and in-line with database protocols.

Marks and Spencer

- Responsible for maintaining a database which correlates information concerning the company's energy saving strategy.
- Retrieve information regarding the store's energy saving performance and update the database accordingly.
- Part of a team helping administer updates and ensure till systems are working proficiently and effectively.

High School

2004 – 2010	Accreditation	Braes High School, Falkirk
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Scottish Highers

4 passes: English, Mathematics and Modern Studies at grade B and Physical Education at grade C.

Achievements

Marks and Spencer

- Voted employee of the month on four occasions for providing excellent customer service and going above and beyond the expectations of the job role.
- Elected member of the Big Involvement Group (BIG). BIG plays a major part in ensuring everyone counts, providing good conditions for work and consulting with employees about matters which affect them.
- Appointed Plan A champion for the store. Plan A is a green strategy with emphasis on cutting waste, saving energy, trading fairly and promoting animal welfare.

Silver Duke of Edinburgh Award

- Effective communication was essential in order to successfully achieve the award.
- Completed a difficult walking expedition where, at times, I had to fulfil both a leadership and team playing role.

Football

- Played football competitively from a young age and was captain of my team throughout my playing career.
- Undertook a coaching role for my team in 2009. I lead team training sessions and took control of several matches.

Interests

Open Source Projects

- In my spare time I contribute to Open Source projects on GitHub.
- I have a personal interest in Open Journalism. It combines my passion for technology with my enjoyment of writing.

Extra Curricular

- I enjoy playing football, listening to music, going to the gym to keep fit and meeting up with friends.