James Anthony Daniel Fowkes - Curriculum Vitae

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Date of Birth: 9th October 1985

Personal Profile:

Embedded software engineer pursuing a successful career in the electronics industry, with wide knowledge and experience of embedded software design and related disciplines.

Electronics experience and skills:

- Excellent knowledge and experience of embedded C development and debugging for 8/16/32-bit microcontrollers.

- Programming languages:

- C, C++, Python, PHP, HTML/CSS, Javascript/jQuery, Basic (several variants), MATLAB, Qt and .NET frameworks, C#.

- PCB schematic/layout design.

- Additional good knowledge of:

    - MVC frameworks, database design principles and SQL.

    - VBA Microsoft Office automation and VBScript for Windows scripting.

- Some experience with 3D CAD (Pro/Desktop, Alibre Design).

- Working knowledge of the Linux operating system.

Personal experience and skills:

- Former president and safety officer of the Nottingham University gliding club. Purchase of new glider involved effective communication and negotiation with several individuals and organisations. Formalised club safety routines to ensure better operational running. Club achieved Student's Union Gold Award.

- Strong presentation skills, have given talks to groups of 3-20 persons on various scientific, technological and gliding topics.

- Regularly co-run "Introduction to Arduino" and other electronics workshops at local workshop (Nottingham Hackspace).

Employment History:

August 2014 – Present

Development Engineer, G2 Innovation Ltd, Nottingham (Part-Time)

Electronic and software design from specification to complete product, working closely with mechanical and design engineers to ensure all requirements and constraints are met.

Rapid prototyping of designs and ideas on Arduino and mbed platforms. Role requires selection and evalution of different technologies and vendor solutions and assessing their suitability and performance for a particular design.

Responsible for maintainence of electronics lab and equipment and running local source control server.

Self-Employed Electronic Design/Embedded Software Engineer

Embedded software, schematic/PCB design and PCB/soldering work for individual clients. Various roles.

February 2011 – August 2014

Embedded Software Engineer, Videojet Ltd, Nottingham Science Park, Nottingham

New software development and codebase maintenance for industrial printers (coding and marking sector).

Primary role is development of C code to run on NIOS-II soft processor on Altera FPGAs. High reliability and speed are needed to meet business/technology specifications. Occasionally required to write new features in C++ for running under Windows CE. Took initiative to write Python data analysis and test scripts for bugfixing and code verification.

Principal embedded software developer for new product successfully launched in 2012. Several new features and bugfixes for existing products also successfully implemented.

September 2007 – February 2011

Lead Engineer, OneClick Technologies Ltd, Annesley, Nottingham.

Development of energy saving and home automation consumer products. Role includes circuit design and PCB layout, firmware development and debugging, PCB/product construction and testing.

Additional requirements are software development for testing product-PC interfaces and writing/maintaining in-house record-keeping databases and spreadsheets.

Role also involves some customer technical support, CAD/CAM (2 ½ axis milling, 3D printing) and developing ISO9001 QC/QA procedures.

Referees available on request.

Education History and Qualifications:

September 2004 – June 2007

University of Nottingham, BSc Physics (2:2)

A2/AS Levels: A2 Physics (A), A2 Computing (A), A2 Mathematics (B), A2 Systems and Control (Electronics) (B), A2 General Studies (A), AS Critical Thinking (C)

Additional: Full clean UK driving license