



Ashley J. Robinson

Education

- Oct. 2010 - **Master of Engineering**, *with First Class Honours*, in Electronic Engineering with Artificial Intelligence, University of Southampton.
Jun. 2014 Modules include Analogue Electronics, Computer Systems, Control Theory, Digital IC Design, Design and Test of Digital Systems, Electromagnetic Fields and Waves, Evolution of Complexity, Image Processing, Intelligent Algorithms, Machine Learning, Management, Semiconductor Devices, Signal Processing and Software Development
- Sept. 2008 - **A-Levels**, Alton College, Alton, Hampshire.
June 2010 Electronics (A*), Mathematics (A) and Physics (A). AS-Level Computing(A).
- Sept. 2003 - **GCSEs**, Amery Hill Secondary School, Alton, Hampshire.
June 2008 Art(D), Biology(A), Chemistry(A), Design and Technology(A*), English Language(B), English Literature(C), Geography(B), ICT(B), Mathematics(A*) and Physics(A)

Work Experience

- Sep. 2014 - **Cambridge Design Partnership LLP**, Church Road, Toft, Cambridge, CB23 2RF
Present Consultant Electronics Engineer.
A technology and product design consultancy. Working on many cross discipline projects but remaining focused on the application of electronics; typically in consumer products. Core skills applied include analogue circuit design, PCB design and digital hardware design with concurrent low level software development. Additional skills exercised range from basic mechanical engineering to high level software development. Recently I have been involved in many projects using inertial measurement units (IMUs) and other sensors to track user behavior. This has been in the capacity of wearable technology for sports applications but also to gain user insights. A typical example would be instrumenting an existing product so a piece of electronics can wake-on-motion to log accelerometer and gyroscope data to later gain insights to use frequency and handling. Wearable sensor development has involved writing algorithms from the ground up to compute bio-mechanical metrics from raw IMU data which is then validated with motion capture equipment.
- Summer 2012 **Cambridge Silicon Radio (CSR) PLC**, Churchill House, Cambridge Business Park, Cowley
Summer 2013 Road, Cambridge, CB4 0WZ
Student Placement.
Working with the digital design team assisting with the development and verification of their Near Field Communications (NFC) technology. Side projects included verification of an LCD hardware driver and designing a serial to parallel converter for in-house test hardware. This was 20 weeks in total divided over two summers. I was awarded UKESF Scholar of the Year partly based upon my achievements at CSR.
- Jul. 2008 - **Sainsbury's plc**, Draymans Way, Alton GU34 1SS
Sep. 2010 Customer Service Assistant.
Assisting customers along with operating both traditional and self-serve checkouts.
- Jul. 2006 - **M.J.Robinson Garden Maintenance**, 6 Ferney Close, Chawton, Hampshire, GU34 1SQ,
Oct. 2013 Assistant to the head gardener.
Maintaining the grounds of homes and businesses, large and small, in the Alton, Hampshire area.

Additional Qualifications and Achievements

Jun. 2014	Captec Award for Entrepreneurial Industrial Innovation	<i>Excellence award approved by Professor Max Toti.</i>
Feb. 2014	EMECS-thon Winner	<i>Best "Internet of Things" Implementation at the University of Southampton.</i>
Nov. 2013	UKESF Scholar of the Year	<i>Presented at the National Microelectronics Institute gala dinner.</i>
Jan. 2012 - Jun. 2014	UK Electronics Skills Foundation Scholar	<i>UKESF is a collaboration between industry, universities and the public sector.</i>
2009 - Present	Full clean UK Driving License	

Skills

Electronics Design	Design of electronic circuits using Altium , Eagle and KiCad schematic capture/layout tools and SPICE simulations. Analogue, digital, mixed signal, switch mode power supplies, high speed digital interfaces, low power and common frequency RF.
Electronics Test	Extensive use of basic test equipment. Multimeters, oscilloscopes, programmable loads, spectrum analysers, signal generators and LCR (Inductance, Capacitance and Resistance) meters to as low as Femto Farads. Electromagnetic compatibility (EMC) testing for radiation, immunity and electrostatic discharge (ESD).
Electronics Manufacture	Prototyping skills using stripboard/copper-clad, hand assemble techniques down to 0402 passives and 0.5mm pitch discrete components, high volume (1M+/year) component sourcing, outsourcing PCB layout and working with small/large volume (1M+/year) contract electronics manufacturers (CEMs). Familiarity with EMC, low voltage and waste electronics EU directives.
FPGA	Designed digital modules in Verilog and simulation using ModelSim , Cadence and Icarus .
ASIC	Design and simulation of custom libraries and integration for VLSI chip manufacture using Magic .
Embedded Software	Developed embedded software on Atmel, Microchip and STM32 microcontrollers. Mainly in the C programming language and often using FreeRTOS .
Software	Developed CLI and GUI applications using C# and Python and basic server side applications in PHP .
Modeling and Simulation	In depth modeling and simulation of custom electronic components and physical principals using Matlab and SciPy . Experience with SciKit-learn machine learning library.
Mechanical	Basic CAD experience in FreeCAD and use of FDM/Polyjet 3D printing technology.
Project Management	Involved in proposal writing and planning for multi-discipline work packages. Managed projects lasting over 6 months worth £150K in company fees with a 3 member team. Electronics/software lead on several 2 to 4 team member projects.

Hobbies and Interests

Film	Avid film fan with a passion for science-fiction.
Clay Shooting	Clay pigeon shooting since the age of 16 usually sporting layouts.
Hobbyist Electronics	Audio equipment, radios and robots. Many projects using electronics and maths skills acquired from the age of 15 onward. Using microcontrollers, FPGAs and analogue circuits.
Off-Roadng	Land Rover owner in the past along with a couple of motocross bikes. Lots of green laning around Hampshire.
Programming	On both Windows and Linux environments. Assembler, C, C#, PHP, Python and Verilog/SystemVerilog. Constructed my own website which contains a growing list of software projects.
Music	Enthusiastic guitar player. Broad range of music taste.

Surfing I have been surfing for two years now and recently brought my first surfboard.

Travel I have backpacked across India staying at hostels from Delhi to Mumbai and Goa. I have been on self organised camping trips across the USA, Scotland and Europe also many other places throughout England during my time in the Scouts. I have also toured Canada by RV and train from Vancouver to Montréal with many detours.

Contact Details

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References

Mr Richard Cambridge Design Partnership, Church Road, Toft, Cambridge, CB23 2RF, England, UK

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Tel: +44 (0) 1223 264428

Dr Geoff University of Southampton, University Road, Southampton, SO17 1BJ, England, UK

Merrett Email: gvm@ecs.soton.ac.uk

Tel: +44 (0) 2380 592775

Media Presence

CDP: Blogs www.cambridge-design.co.uk/news-and-articles/blog/flaming-hoverboards

www.cambridge-design.co.uk/news-and-articles/blog/exploding_batteries

www.cambridge-design.co.uk/news-and-articles/blog/meet-ashley-our-near-field-communications-expert

ECS: Careers blog.soton.ac.uk/careershup/2014/12/15/hearing-from-our-graduates-ashley-robinson-at-cdp/

EMECS-thon: youtu.be/0NC3W49Lj-A

Winner

UKESF-ECS: www.ecs.soton.ac.uk/news/4376

Finalist

Version Control

CV Date 29th September, 2017

Version 2.10