Sam Kent

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Education

The College Of Richard Collyer **September 2010 – June 2012**

- A-Levels
  - Electronics: A*; Computing: A; Maths: A*; Further Maths: B;
    (For my Computing project, I designed and programmed an audio effects unit app for iOS. This involved using the Core Audio framework to manipulate the audio data)
  - Extended Project Qualification: A
    (USB Midi Controller using an Arduino Mega to process and interface with the computer)

University Of Leeds **September 2012 - Present**

- Year 1
  - Circuit Analysis & Design, Electronic Materials & Devices, Communications Systems, Fundamentals Of Electrical Engineering, Digital Electronics & Microcontrollers, Analytical Techniques
- Year 2
  - Mobile Applications Project, Embedded Systems Project, Energy Systems & Control, Communications Theory, Transistors & Optoelectronics, High Frequency Circuits & Systems
  - Embedded Systems Project achieved design and build of a Guitar Hero style game using a Nokia 3310 display and an mbed LPC1768.
- Year 3
  - Digital Communications, RF and Microwave Engineering, Semiconductor Technology, Embedded Systems, Professional Studies,
  - Group Design Project consists of designing and building a modular synthesizer as 50% of the 3rd year course in a team of 4. This includes a range of techniques such as analog circuit design, DSP, PCB and project management.
- Year 4 – Demonstrations Engineer Placement at ARM
- Year 5 – MEng aiming for a 1st
  - DSP for Communications, Data Communications and Network Security, FPGA Design for SoC, Embedded Microprocessor System Design, Industry Dissertation, Individual Project
  - The individual project involves investigating, designing, and building a system to monitor the amount of Hand Arm Vibration a user is exposed to. This has involved experimenting with accelerometers and tools, prototyping embedded systems, processing data in both MATLAB and on board using CMSIS-DSP, and managing the time and tasks needed to complete the project.

Skills

- Programming Experience
  - Proficiency in languages used in work, education and programming at home:

    C, C++, C#, Objective-C, Processing, Java, .NET, PHP, JavaScript, jQuery, HTML5, SQL
- Microcontroller Experience
  - Used various microcontrollers and IDEs to design, develop, and debug small and large projects
    - Experience with Keil MDK, DS-5, CMSIS, GCC, CMake, Eclipse, Arduino, mbed

- Linux
    - Setting up servers, development environments, and projects on Servers, Single Board Computers, and VMs
    - E.g. OpenCV on Firefly RK3288, Sensors To Servers on Applied Micro XC-1

Employment

Demonstrations Engineer Intern (ARM) **July 2015 – August 2016**

- Building demonstrations using ARM technology
- Discussing features and implementations of demos at events/trade shows such as ARM Tech Con and Embedded World
- Projects include: Data visualizer for Sensors to Servers IoT Demo, Twitter Powered Giveaway Dispenser, Traffic Sign Recogniser, IR Touchscreen

Development Subcontractor (Freeman PC Services) **June 2011 – June 2015**

- Used a variety of programming languages – PHP, HTML, Java, C, C#
- Worked on a variety of projects – including a cyber forensics application
- Worked to deadlines and project specifications
- Interacted with clients to understand their requirements for the system

IT Assistant (Nucleus Ltd) **July 2010**

- Paid work experience
- Rebuilt servers, configured networks, PAT tested equipment, helped out with general IT problems around the office

Self Employed Web Development **2007 – June 2011**

- Developed web systems for local clients
- Interacted and discussed ideas with clients to successfully complete projects
- Worked to deadlines

Other Projects

- Soundsystem
    - Designed and built a small sound system in Leeds to hire out for parties, and events.
        - Designed and built speaker boxes to get the best sound using tools such as WinISD to simulate designs
        - Repaired broken equipment such as amplifiers, mixers & turntables
        - Managed bookings, transport and finances for the business
- Smartwatch
    - Designed and prototyped a smart watch using a NRF52 dev board to receive notifications from my phone using BLE
- Custom Analogue Audio Mixer
    - Breadboarding analogue audio circuits, PCB design, troubleshooting issues
- Sound reactive light show
    - Audio processing, DSP, prototyping the lights