Simon Thomas Vella (MEng, MIET)

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Current Employment

- **Ancoa Software Ltd**, Mitcham, London
  - **Solution Architect** (February 2017 – present)
  - **Lead Software Developer** (November 2016 – February 2017)
  - **Senior Software Developer** (September 2015 – November 2016)
  - Developing new functionality and architectural components of a financial surveillance and compliance solution for market participants, leading a small development team, using **C++ 11/14**, **Dart** and **Python**, built for Windows and various flavours of Linux.
  - Designed and implemented strategies for dealing with large data sets, to enable performant ingestion, visualisation and analytics.
  - Presented technical overviews of the product to current and prospective clients, and involved with training and Level 3 support.
  - Gained an awareness of trading mechanisms and technologies in financial markets across a range of instrument types, such as equities and fixed-income, and the structure of trading and market data.
  - Involved with hiring decisions and process and technology transitions in the team, such as branching strategy, build and release management, and the introduction of merge requests.

Skills Profile

- Core languages: C++ 11, Python, C#, Dart
- Libraries and Frameworks: STL, Qt 5, ZeroMQ, MVC, LINQ, Boto 3, NodeJS
- Technologies: REST, WebSockets, TCP/IP, FIX
- Source control: Git, SVN, Mercurial
- Source and Build Management: GitLab, Jenkins
- Compilers and IDEs: GCC, Visual Studio, Qt Creator
- Operating Systems: Windows Server, Ubuntu, CentOS, RedHat, Mac OS X
- Networking: Amazon Web Services (AWS)
- Other languages: Shell scripting, Javascript, Assembly, Pascal, VB.NET

Education

- **September 2008 – July 2013: MEng Computer Systems Engineering** with Professional Development
  First Class Honours - Brunel University, Uxbridge
- **September 2001** - **July 2008** Oakwood Park Grammar School, Maidstone
  - A2 **Physics** (A) A2 **Computing** (A) A2 **Mathematics** (B) AS **Geography** (A)
  - 10 GCSEs (A* - A)

Project work

- **Data Representation Optimisation**
  - Led development to improve performance and memory usage in the Ancoa application, specifically in the data ingestion and processing components.
  - Re-architected a foundational library for representing data, replacing heap with stack allocation, removing overhead, and eliminating global state to enable concurrency. Directed work to migrate and refactor identified bottlenecks in calling code to work more efficiently. Libraries elsewhere in the code did not need to be edited.
  - The improvements enabled data ingestion rates for the product to dramatically increase, allowing processing of higher volumes of data within the required time window.

09/04/2017

- **Wireless Radiation Dosimeter for Biomedical Applications – Level 5 Group Project**
  - Worked within a team of electrical, electronics and other computer systems engineers, as well as Rutherford Appleton Laboratory and MediWise Ltd. to produce a prototype wearable radiation dosimeter device for use within proton-beam cancer radiotherapy treatment.
  - Produced the software library interface between the hardware device and the end-user application, and the client to the MediWise web service; also aided in technology choices, overall solution architecture and directing the project organisation.
  - The system was successfully implemented and demonstrated at the Brunel Engineers Showcase, May 2013, for which the team received the Anson Fund Prize for best project related to medical applications.

Previous Employment

- **Delcam Ltd**, Birmingham
  - **Software Engineer (July 2013 – August 2015)**
  - **Placement Software Engineer (July 2012 – September 2012)**
  - Developed new features and improving existing functionality for Delcam's flagship CAM solution PowerMILL, across many aspects of the application, as part of a large development team.
  - Involved in all stages of development, from producing and presenting specifications, to producing and implementing a solution, through to demonstrating the results to stakeholders ahead of product release. Increased awareness of both the user's perspective and commercial considerations.
  - Gained deeper knowledge of **C++** through its application in a very large codebase of over 5 million lines, and design patterns and good practice to ensure code maintainability and testability, as well as the use of shell scripting and other techniques for streamlining development processes.
- **July 2010 – August 2011** Intel Corporation (UK) Ltd, Swindon
  - **Technical Marketing Engineer (Intern)**
  - Supported Intel's customers across EMEA through their system integration design cycles, for the Enterprise Platforms and Services Division.
  - Liaised with both customers and the business unit to root-cause issues and produce solutions.
  - Involved with customer training, including part-presenting a two-day training course about troubleshooting servers and new Intel products in Berlin.
  - Took on additional responsibilities such as managing the local lab network and organising webinars, as well as projects to aid team productivity and improve services offered by the support organisation.
- **January 2012 – May 2013** Brunel University, Uxbridge
  - **UCAS Assistant**, Part time
- **July 2006** - **September 2008** British Home Stores, Aylesford
  - **Merchandise Associate**, Part time

Interests

- I am a registered member of the Institute of Engineering and Technology (IET).
- I helped set up an electronics engineering society at university, acting as treasurer and helping organise social trips and events for the society. I received the Student Ambassador 2013 award at the end of my studies.
- I like to learn new languages; I took an introductory German course at university, took a refresher course in Spanish, and self-teach Italian.
- I am a keen role-player, participating in several groups as both player and game master.