Thomas Booth

Experience

Government Digital Service, London

Lead developer   **June 2015 - Present**

- Handing over reigns of Performance Platform
- Transitioning to leading a combination of GOV.UK and Performance Platform. In total, 5 teams consisting of about 40 developers.
- Organising monthly meetings for teams to share what they have been working on and for best practices to be discussed and spread.
- Chaired interview panel

Senior developer   **April 2014 - June 2015**

- Talking to EC, USDS and Australian Government about Performance Platform
- Presented at London D3 meetup
- Technical lead for the Performance Platform
- Filled in as interim architect on our projects
- Participated in interviews both on the panel and doing code tests

Developer   **August 2013 - April 2014**

- Built out infrastructure: Sensu, Graphite and ELK. All using Puppet on top of vCloud

IG Group, London

Technical lead   **September 2012 - April 2013**

I was successful in pitching a new product and charged with leading a team to build it. I also chose to project manage the product, dealing with all the dependencies on other departments required to bring the product to fruition.

- IG Dealing Chrome Extension A Google Chrome extension allowing our customers to deal straight from their favourite websites. We match markets mentioned in web pages to instruments we offer, allowing customers to get to a deal ticket in two clicks. The motivation behind this product being to reduce the 'friction' between a customer developing a want and us allowing them to fulfill it. The product consists of a Javascript front-end with a Java service providing data for use with matching. Some interesting areas of the project were:
  - Creating a new front-end build chain including LESS support and precompiled Handlebars.js templates. This has now been adopted by our Insight team due to performance and flexibility gains;
  - Developing a derrivative of the Aho-Corasick string matching algorithm in order to efficiently find mentions of markets;
  - Building an error reporting library and service for JavaScript projects, now in use by all of our front-end projects.

Developer   **October 2010 - September 2012**

While I was a Developer I worked on the follows, in reverse chronological order:

- **HTML5 Charts** I worked on a charting package developed both for our mobile platforms as well as to hedge against the future of our Adobe Flex charts. This was built using d3 to provide SVG manipulation and a custom javascript library to provide indicators and real-time rendering. Some aspects of the project I am proud of are:

- Building an ActionScript3 to JavaScript converter, utlizing the parser from the Flex compiler. This was done in order to convert the indicator logic from our existing charts. This saved about 200 man days of work;
- Creating a standard inside our company for communicating between native and web applications;
- Integrating jsTestDriver into our build chain to replace the aging jsUnit.

- Insight I was chosen to join a team of the best developers in IG working on our then unreleased Insight product. We were a cross functional team building a single page javascript application on top of a Java middleware. While working on this project I developed a few ideas about how we could help our clients gain most value from our product:

  - A simple machine learning service that would find closely related companies given a training set by our dealers. This made it's way into the final product;
  - A natural language stock screener that you could ask questions like "companies with a market cap bigger than 10 million" or "companies starting with A";
  - Sentiment analysis of companies based on the Reuters News feed.

- PureDeal This is IG's flagship project and the first I worked on. It is JavaScript application powered by a Java middleware with a JSP layer providing initial data for the application. The following are some highlights from my time on the project:

  - Wrote a Maven plugin to generate pre-localised templates for distribution with the JavaScript;
  - Rewrote the tooltips to use modern javascript techniques;
  - Trialed WebSockets using NodeJS and Socket.IO instead of the LightStreamer solution currently used.

As well as working on projects, I helped initiate in-house developer presentations, doing presentations on both NodeJS and GPGPU techniques. I also represented IG at our graduate recruitment days as well as trialing the papers the applicants would sit.

Digital Fidelity, London

Freelance developer **July 2009 - March 2010**

Digital Fidelity provide a digital jukebox solution for high-end audio equipment manufacturers. I wrote and maintained a client library, written in C, for commu- nication with servers running the DigiFi Platform. This job required managing the requirements and specification with both Digital Fidelity and several clients that are using this library inside their applications.

Vixen Controls, London

Freelance developer **July 2008 - February 2009**

Vixen Controls are a hardware automation company who approached me to develop a system to control a large collection of hardware using RS232, TCP/IP and IR. This system has been sold by Visual Nexus for use with their virtual meeting solutions as well as being rolled out in schools and offices. This system was written in C# against the .Net framework running on a Windows Embedded platform.

Education

Imperial College, Kensington, London

BEng Hons, Computing **2007 - 2010**

During my degree I was involved in the following projects:

- During my second year I and two others developed a Linux Kernel Module to run a USB RAM Disk including a memory manager with compression.

- In third year I worked with three other people on a project with Deutsche Bank. We developed a system to monitor and visualise the latency across their infrastructure to ensure that issues delaying trades could be identified and fixed as fast as possible. The system manipulated the bytecode of applications to insert timing logic so that we could track messages moving between services. This was then stored in a PostgreSQL db where it would be read by an analytics service that would calculate running statistics storing these back in the db as well as allowing alerts to be triggered by providing bounds around the different statis- tics. We had a front-end which was a mixture of JSPs, Javascript and Comet to provide a close to real-time view of how their systems were running.
- For my individual project I worked with the Medical Imaging department at Imperial College to develop a real-time system for camera calibration leveraging OpenCL to speed up the calculation of the camera parameters. It was built using C++, the Boost library and OpenGL for displaying and undistorting (using shaders) the video feed.

Latymer Upper School, Hammersmith, London

A levels **2004 - 2006**

Maths, Further Maths, Physics, Computing and Economics (AS)

GCSEs **1998 - 2004**

Biology, Maths, Geography, English Literature, English Language, Physics, Chemistry, Music, French and RS

References

Available upon request.