## Joshua Coales - Curriculum Vitae

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## **Professional Skills**

- Languages: Java, Python, JavaScript, PHP, SQL, HTML, CSS.
- IDEs: IntelliJ, PyCharm, WebStorm, Eclipse.
- Issue trackers: Youtrack, Jira, Bugzilla, Trello
- Continuous integration: TeamCity, Travis, Jenkins, Bamboo.
- Libraries of note: Beautiful Soup, Hibernate, Jersey, Tkinter, JavaFX, Express, Node.js.
- Test frameworks: TestNG, Selenium, JUnit, Mocha, unittest
- Databases: MySQL, PostgreSQL, Microsoft SQL, MongoDB, H2
- Package management: Maven, pip, npm
- Operating systems: Windows, Macintosh OS X and many Linux distributions in home, work and server environments.

# **Previous professional experience:**

### Software engineer (QA automation) - Featurespace Ltd

May 2018 - January 2019

Working at Featurespace, I focused my career more towards the QA automation which I had enjoyed and felt most passionate about in my previous roles. I was allowed to continue my passion for product quality, adding to and monitoring our regression pipeline and expanding the in-house test framework with new functionality to ensure the test suite could be further expanded by those who followed after me.

I worked with a dynamic and close-knit team in a fast-paced environment, with daily stand-ups and frequent meetings between departments to discuss the overall progress of the product towards the next release. I further honed my abilities with research on time management techniques such as the Pomodoro Technique, and making best use of the time I have available.

### **Software Engineer - Software AG**

January 2016 - May 2018

At Software AG I worked on their Universal Messaging product, which is used worldwide by many large organisations to control messaging between applications at the core of their business. The product therefore has a heavy focus on reliability and low latency, with extensive testing across the code base. During my time I have written many new tests for the product, hunting down small bugs and race conditions, further improving the quality of the product.

Working in a team in a multinational corporation has taught me a lot about teamwork and about inter-team organisation. I have had to follow and understand intra-corporational processes in order to properly integrate with many different teams and products. During my time working for this company I've been working with teams around the world, organising and attending meetings across many time-zones.

I've pushed my knowledge of Java much further in this time, with co-workers providing me with many reading and learning materials on topics from security to complex algorithm development to multi-threading and concurrency issues.

### **Head Software Engineer - Infinity Business Advancement Systems**

January 2014 – January 2016

In my time at Infinity BAS I was involved with the entire software development life-cycle from the start of development to bug-fixes, writing documentation and deployment. I've worked with customers and my manager to design and develop a number of different software projects from caller-id software, RESTful APIs to manage sales data and a business management suite. I've worked with a number of other programmers in my time at the company, guiding them and distributing tasks in various projects to ensure that goals are met with efficiency and that the project can be delivered on time.

I've learnt a lot about python, PHP and Java over this time, developing stable software with clear user interfaces. As well as learning about issues of multi-threading, networking, GUI development, continuous integration, unit testing and more while constantly developing and expanding my knowledge and experience on many varied topics. I learnt to integrate my software with already existing software as well as to build entirely from scratch, many times experiencing and managing rapidly changing specifications throughout development. I worked hard to ensure an agile development work-flow could be followed through the office, as well as pushing for strong security practices and rigorous software testing.

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I was also lead in setting up a new VPS for the company, hosting several websites running a variety of content management systems and e-commerce platforms. I chose to use nginx for this task, and while I had no previous training in the software, I rapidly researched and learnt how best to install, maintain and secure it. Later I was required to set up various project management solutions for the team and after some research settled on a solution using Jira, Stash, Bamboo and Hipchat running from a server which I built and run from our offices.

### **University - Swansea University**

September 2011 - January 2014

Through my years at university I was a member of many societies, balancing time spent with their related activities with vital study time and over time I took on various positions within the administrative structure of 2 separate university societies, while also organising and starting my own society there. I developed websites for both of these societies while also collecting and ensuring the accuracy of the information required to keep them going.

# **Personal Projects**

In my spare time I have worked on many personal programming projects, as I have a great interest and passion in programming, I quickly find situations where I want a tool which doesn't exist to my specifications. This is where I will begin to design and plan out construction of a new piece of software to fit my needs. This has often resulted in large amounts of research on varied programming concepts and finding ways around a varied array of problems. Two specific personal projects I have been working on lately are an IRC bot and a website showing the species that can be found in various zoos and wildlife refuges across the United Kingdom. Both these projects have pushed me to learn new technologies and standards, and both have a variety of unit and integration tests written for them, which allows me to rapidly flag up issues caused by further development.

### **IRC Bot**

Over many years I have built and have been improving a custom-built python IRC bot, it has been carefully designed to allow new functions or upgrades to existing functions to be loaded and reloaded while the program is running, it has then been upgraded over the years to support other protocols in place of IRC, to adapt to a changing landscape of messaging applications. The application has been designed from low level libraries where practical, allowing me to interface with servers directly on the socket level, and requiring me to read various Request for Comments (RFC) documents from the Internet Engineering Task force (IETF) such as RFC1459 and RFC2812 and further research the protocol. Later functionality has allowed me to explore functionality interacting with various online services and APIs, exploring various google APIs among others.

### **Zoo Species Listing Website**

I became interested in the RESTful architectural style during my time at Infinity BAS, and have pursued a personal project building a website listing the various species which can be found in UK zoos. This required gathering data from various websites and collating it in a SQL database, then delivering requested information using a REST API built on node.js using the express web application framework which makes extensive use of ES6 promises. A key part of the project was for users to be able to compare distances from their location to various zoos. This was achieved by integrating with the google maps API, which lead to further requirements to cache data whilst also being mindful of regulations surrounding the storage of users' personal data. More recently I've been modifying this project to run on the google cloud platform, migrating the API side to use google cloud functions, and using buckets and SQL databases available via their platform.

## **Qualifications:**

Swansea University, Swansea, SA2 8PP:

Certificate of Higher Education, Mathematics

Prince William Sixth Form, Oundle, PE8 4BS:

A-levels: Mathematics (A\*), Further Mathematics (A), Physics (B)