William Seaford

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Skill Set

Languages	Java, C, Python
Specialist Java	Spring, J2EE, Rest, Hadoop(Map/Reduce)
Java APIs	EJB, JDBC, jSoup, Jackson, JPA, RMI, JMS
Java Testing	jUnit, REST-Assured, Mockito, Selenium
Databases	SQL
DevOps	Jenkins
Operating Systems	UNIX/Linux RHEL, centOS, Fedora, Ubuntu Windows XP, Vista, 7, 8/8.1, 10 Macintosh OSX 10.11, 10.12

Education

2012 - 2015	**Queen Mary, University of London** 2:1 BSc Computer Science (Hons)
2010 - 2012	**Richard Huish College** A/Level: Economics, Psychology, Mathematics AS/Level: Business Studies, Computing, Extended Project Qualification

Work Experience

March 2016 - *Present*	**Consultant** QA Consulting, Manchester

- *Software Engineer*
  HM Revenue & Customs
  Took part in a team to develop a new content management system for fraud prevention which interacts with different project endpoints, irrespective of repository. This was comprised of several different REST microservices within Spring Boot which made for a composite system to ingest, retrieve and search content. This was built using test driven development and adhered to an industry production standard.

  Main contribution to the project was creating a custom deserialiser using the Jackson API and integrating Spring Sleuth into the existing customised logger using Log4J, later replacing it with Logback. Also responsible for bug-fixing and implementing an exception mapper to catch specific exceptions relevant to the project. On rotation I was a Java tester. I made use of jUnit as the main basis for testing Java code, Cucumber (Gherkin) to create the feature files, Selenium for automated testing of UI elements, Mockito to mock behaviours when reliant on other files and Rest-Assured for automated testing of REST services. This made use of behavior driven development and end-to-end testing of services, as opposed to software developments test driven development which test individual code segments. Also exercised skills in Jenkins creating jobs to build or deploy projects.

  All work was conducted in an agile scrum environment which consisted of a series of eight 2 week sprints. These included joining in sprint planning to form stories, input ability to complete work committed to and forming the next 2 week sprint periods, daily stand-ups where daily progress is shared with the team & sprint reviews and retrospectives which looked at the work completed and how the next sprint could be achieved better.

- *Platform Engineer*
  Capgemini
  Contracted to Capgemini for research & development of a cloud based platform using tools such as the Amazon web services EC2 and Hashicorps Vagrant and Terraform to provision environments for use in the context of API provisioning, identity management, automated provisioning and service management.

  Strong use of UNIX based operating systems as well as OS X. Worked within an agile scrum environment. My contributions include implementing an automated service desk, researching advanced security software such as OSSec & SELinux as well as provisioning environments for pre-release clients.

January 2015 - April 2015	**Teaching Assistant** Brampton Manor Academy East Ham

Assigned a 10 week placement for a university module working with a year 8 class. Duties included assisting the teacher in aiding learning to pupils and answering any technical questions students have relating towards curriculum and beyond. Given control of the classroom for 20 minutes each week to teach material derived from own lesson plan with highly positive feedback and thorough enjoyment from all students. Demonstrated excellent aptitude for teaching.

Dissertation

Exploration of fractional routing

Investigated the effects of bottlenecking within a butterfly network graph. Took an in depth look at the research paper "network routing capacity" by J.Cannons and extracted the algorithm proposed, applying it towards the network graph and examined the effects certain edges with limited capacity has on the routing capacity. Topic included a review of network coding (coding information as a function at the node) and featured strong use of linear programming within Mathematica. Grade A achieved with comments made by examiners praising use of critical thinking and approach to a technically hard subject.

Past Projects

Group Projects

Hospital/GP Application: Made use of Java Database Connectivity (JDBC). Contributions include creating the staff records module and assisting with integrating it with other member's modules.

Online ordering REST service: Delivered a website in a REST format for the inventory of a shop. Contributions include development of the payment, credit, line-items and employee user modules of the project as well as Java testing.

Niche Weather Application: Team leader in building a multi display mobile weather forecast application in Java Swing with specific design towards planning with diary elements.

Individual Projects

Image Downloader: Implemented jSoup so that when given a URL, downloads all images found on the page

Dining Philosophers: Implemented the dining philosopher's problem using EJB to demonstrate EJB's usefullness then also show the program's complexity by breaking it into an erroneous state.

Problem Solving: Also has high interest in solving problems posed on websites such Project-Euler and various forum boards with notable solutions on Github.

References available on request