RUSSELL JAMES WATERSON

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PROFILE

I am an ambitious, self-motivated and hardworking individual with a passion for computing, technology and software development. I always use my initiative to perform roles to the best of my ability and thoroughly enjoy working in or leading a team. I push myself to seek new and varied challenges as this allows me to explore my full potential, exploring and extending my capabilities. I am inspired by and interested in the field of computer science. I am a quick learner, allowing me to absorb new ideas and concepts. Furthermore, I am very results driven which allows me to continuously stay motivated and achieving my goals. After working for over a year in a fast-paced data driven technology start-up, undertaking a wide variety of roles and responsibilities, I am now eager to take the next step and stretch myself in a new and challenging position.

TECHNICAL SKILLS

BACKEND TECHNOLOGIES

- **JAVA:** Extensive experience with over 2 and a half years in a professional work environment and over 3 years in an educational environment, all whilst accompanied with development in personal side projects. Hands on experience with popular frameworks including **Spring Boot** and **Dropwizard.**
- **Testing:** Test Driven Development, JUnit4, JMockit, Cucumber Behavioural Tests using Gherkin, Robot Framework.
- **Relational Databases:** Use of Java Database Connectivity (JDBC) and SQL to access and query a number of DB technologies including: MySQL, Microsoft SQL Server, Oracle, Postgre, and more.
- **Knowledge Graphs and Semantic Web:** Experience querying data (using SPARQL), mapping data (using RML – RDF Mapping Language), and defining data with ontologies (through OWL and TTL) for Linked Data Structures. Hands on with technologies such as Amazon Neptune, Stardog, GraphDB, Blazegraph, Allegrograph, and more.
- **Property Graphs:** The transformation of RDF Semantic data to support Property graphs such as Neo4j while adhering to Apache TinkerPop to allow for graph traversal (through Gremlin) and querying (using Cypher).
- **Message Queues:** Considerable hands on with Apache Kafka, both in application code, and in local and docker environments, setting up secure and encrypted clusters of Producers and Consumers.
- **RESTful APIs:** Exposure of endpoints to allow for RESTful calls to backend code.
- **Android App Development:** In native Java, incorporating XML, SQL, Google APIs, and other technologies.

FRONTEND TECHNOLOGIES

- **JavaScript Libraries and Frameworks:** React, Redux, NodeJS
- **Web Development Tools:** XML, HTML, XHTML, CSS, JavaScript, AJAX, JSON
- **Wireframing:** JustInMind, Balsamiq

DevOps

- **Amazon Web Services:** S3, RDS, ECR, ECS, Lambdas, IAM, VPC
- **Docker:** Building, deploying, and managing Docker containers
- **Development Pipelines:** Bitbucket Pipelines, Artifactory, Maven, Gradle

PROJECT MANAGEMENT AND DEVELOPMENT TOOLS

- **Dev Team Tools:** Git (GitHub), Bitbucket, Jira (Scrum, Stand ups, Retros, Burnup Charts, etc), Confluence, TDD, GitHub Flavoured Markdown, Lucidchart

WORK EXPERIENCE

SEMANTIC INTEGRATION / DATA LENS LTD *Nov 2018 – Present* Role: **Software Developer**

- Over the course of my year and a half at the company, my role developed from a more junior client facing consulting position to taking the lead responsibility for the development of an entirely new range of SaaS products from the ground up. As a consequence, I was exposed to a wide range of technologies and undertook a vast breadth of different roles; due to the small size of the company. My first ten months were client facing consulting; and from September onwards I have taken the lead in building the new SaaS product suite.
- As a company, our focus surrounds Knowledge Graphs, Linked Data and the Semantic Web, building semi-bespoke solutions for companies, in-cloud or on-premise to transform and migrate existing and new data into this invaluable semantic data structure. Solutions included a Classification Engine for Photobox, an Ingestion Engine for Pearson, and a tool for the visualisation, materialisation and virtualisation, and DB management for TP ICAP. This work required a full stack of development, involving a Java backend, with a JavaScript based front end utilising React, Redux, and NodeJS.

- Seeing the repeatability of our semi-bespoke systems, we pivoted away from consultancy and over to building an inhouse product which aimed to be a tool for ingesting all types of data structures (CSV, XML, JSON, Relational SQL DBs, RESTful APIs, etc), transforming them into RDF following W3C standards, and writing them to a wide selection of Knowledge and Property Graphs, whilst also providing rich metadata and provenance.
- Independently taking the system from whiteboard drawings and flowcharts to an operational POC, and then guiding a team of myself and four other developers to an MVP, I played an essential and core role in the architecture, development, and deployment of these systems, having hands on at every stage of the development stack. This enabled me to be exposed to a wide array of technologies as seen previously in my list of technical skills.
- Acting the role of Project Manager when management was away, I hosted and lead a number of stand ups and scrum meetings as I had an intimate knowledge of the system as a whole as well as what's being worked on by who.

THOMSON REUTERS *Aug 2015 – Aug 2016* Role: **Junior Software Engineer**

- Working in the Finance and Risk Department within TR, I was part of a team of 9 developers, consisting of a technical team lead, 6 senior software engineers, and myself and one other junior software engineer. Using an Agile software development methodology, we would have team scrum meetings twice a week, with sprint a cycle lasting two weeks.
- As a team, our project was the migration of a legacy tape based historical time series system, to a cloud-based system using and hosted on AWS technologies, handling the ingestion of petabytes of data. I undertook a wide variety of tasks, including the implementation of brand new Java based components within the system, the creation of a functional test suite written in Robot Framework, and the writing of (Bash, Python, and Perl) scripts to perform a variety of jobs.

CAPGEMINI *Jul 2012* Role: **Work Shadowing with Vice President of Consumer Products and Retail**

- Worked with the VP of Consumer Products and Retail to understand how my IT skills would be relevant in a corporate environment. The hands-on elements of this role included the provision of management reporting, the tracking of deadlines and the attendance at key meetings.

EDUCATION

THE UNIVERSITY OF BIRMINGHAM 2013 - 2017

BSc Computer Science w/ Industrial Year **Final Result: 2.1 (67%)**

Year Four **GRADE: 1ST** – Databases (79), Neural Computation (73), Human Computer Interaction (73), Machine Learning (71), Networks (70), Computer-Aided Verification (69), Intelligent Data Analysis (65), Computer Science Project (65)

Year Three **GRADE: PASS** – Industrial Year as Junior Software Engineer and Thomson Reuters

Year Two **GRADE: 2.1** – Mathematical Techniques of CS (72), Team Project (71), Computer Systems and Architecture (69), Professional Computing (69), Models of Computation (65), Intro to Computer Security (58), Computational Vision (57), Software System Components (56)

Year One **GRADE: 2.1** – Information and the Web (76), LC Foundations of Computer Science (71), Introduction to Software Engineering (69), Language and Logic (67), Introduction to AI (64), LC IWLP French Level 1 (MOMD) (75)

JOHN HAMPDEN GRAMMAR SCHOOL FOR BOYS 2006-2013

A Levels: Computing (A), Maths (A), and Further Maths (B) / GCSEs: 12 Grade A* – C including Maths (A) and English (B)

PROJECTS – ANDROID APP DEVELOPMENT

GOOGLE PLAY STORE PAGE: https://play.google.com/store/apps/developer?id=Russell+Waterson

THE SMART REVISION CALENDAR Type: **Computer Science Degree Final Year Project**

- The proposed project was to create a smart revision timetable and calendar application. The premise is, the user enters various inputs, including their class times, extracurricular activities, exams and deadlines, and their preferred learning style. The application will then generate a revision timetable around the classes and activities with the exams as goals to work towards. The user can then give feedback on how productive they have been, meaning that the more the user uses the system, the more the timetable will learn and be tailored to that particular user.

THE SCREEN CALCULATOR Type: **Personal Project**

- The Screen Calculator is an application featuring numerous tools for screen measuring and comparison. This includes: diagonal, vertical, and horizontal measurements in inches or centimetres; dots per inch (DPI) density measures; and in-depth device information. Includes features that are ideal for developers and designers.

NEXUS 6P DOUBLE TAP TO WAKE Type: **Personal Project**

- An application designed for the Google Nexus 6P to enable the Double Tap to Wake feature. Once activated, the feature will persist even through reboot. The app unlocks a built-in feature hidden within the stock kernel of the device.

REFERENCES

References available on request