**Sonya Nadesan**

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Key Skills

Java | SQL | JavaScript | ASP.NET | MVC | C# | PHP | mySQL | Maven | JavaFX | Oracle SQL Developer | Junit | Database Design | VBA | Automated GUI Testing | Object Oriented Programming | AJAX | REST API | Report Writing | Mentoring | Teamwork | Version Control | Java Swing | jQuery | VB | Software Quality Assurance | Microsoft SQL Server

Work Experience

Graduate Software Developer, GenSight, Hampton

(July 2017 – Present)

Projects undertaken include

* User interface programming (list boxes) in JavaScript and jQuery
* User interface programming (colour picker) in JavaScript and jQuery, .NET and Telerik
* Development of Project Financial Tool for *Johnson & Johnson* in VBA
* Implemented validation system in VBA that would detect typos, abbreviations, extreme values and invalid entries
* Implemented a program that would suggest valid entries based on user input
* Implemented a program that would ensure data consistency in spreadsheets e.g. issues are raised if data is not complete. For example, if the user enters values for some of the required field (NTS, NTSLC, Fully Loaded GP, Cannibalised GP), but not all for a particular year
* Implemented a system that would provide users with buttons in the validation sheet, which would navigate them to the location of the issue being raised
* Developed a series of test cases using methodologies such as equivalence partitioning, boundary value analysis, regression testing and stress testing
* Improved on existing test cases
* Executed test cases and fixed bugs
* Developed SQL scripts

Teaching Assistant, School of Computer Science & Mathematics, Kingston University

**(September 2016 – April 2017)**

Responsibilities include

* Help second year students in their Programming workshops (NetBeans, Java OOP, File reading/writing, Swing, JUnit testing, JSP)
* Help second year students in their Database workshops (Database Design, Normalisation, SQL, Oracle SQL Developer, UML)
* Help first and second year students during reading week with programming

Academic Mentor, Student Engagement & Enhancement Group, Kingston University

**(September 2015 – June 2016)**

Responsibilities include:

* Attend training sessions: training for mentors, mental health & resilience training, leadership training, personal development training
* Provide first-year students with online and on-campus support
* Gathered feedback on sessions and considered ways for improvement
* Attend meetings with fellow mentors and one-to-one reviews with the mentoring officer
* Advertise the mentoring scheme to courses across the university (Student Show-Case Event)
* Help students, who are repeating a year, with time management, stress-management, and improved study habits
* Volunteered in usability testing of university systems

Education

Kingston University - BSc (Hons) Software Engineering, First Class (Achieved 80%)

**(September 2014 – June 2017)**

* One of the few first-year students at the university to have successfully built a console application that mimics the classic card game, Blackjack, in Java, using the concepts of object-orientation. I later implemented it in object-oriented JavaScript, which is available on my site
* Chosen to represent programming students and speak to the chancellor of the university about the module
* Appointed as lead developer in the implementation of several desktop applications using the NetBeans IDE. All applications were developed in Java. Throughout the projects, I developed skills in GUI (Swing), file reading/writing, GIT, as well as having acquired a working knowledge of MVC
* Built upon a given Java Maven FX project to develop a music management system. Features implemented include: view playlist in a table, create playlist, add music to the playlist, set playlist as default, play tracks and view album artwork (this was obtained from the ID3V2 tag), as well as providing users with a user interface. Unit tests including automated GUI tests were implemented. The system’s user interface was later improved and having learnt about web services in my spare time, LastFM’s REST API was used obtain the album artwork.
* Designed and implemented a database in Oracle SQL Developer and presented several complex SQL queries. The database was later implemented in mySQL, and a web application was developed. This was a pair-programming project; my responsibilities were mainly in programming in PHP, JavaScript and jQuery/AJAX. My major achievement was implementing a feature that allows administrators to define offers, and apply these offers to certain products, specifying the date on which the offer expires. A function was developed that calculates the cost of a product, taking into consideration any offers that may apply on the day it was called
* Developed an e-marking system in PHP, JavaScript, AJAX, jQuery, JSON, HTML, CSS, BootStrap, and mySQL. The system aims to increase the quality of marking by encouraging anonymous marking and enhancing the usability. From the literature review, it was clear that there were several reasons why lecturers do not favour anonymous marking such as the barriers in managing students with special needs; these issues were addressed by the final product. Usability of e-marking was also explored. Since many academics prefer marking on paper, students’ submissions were converted to HTML using the Xylude library and displayed behind a transparent canvas that allows users to make doodles. On saving the doodles, a screenshot is taken and saved; this was done by the HTML2Canvas library. The annotation features were improved based on feedback sought from the final viva, subsequent to the submission of this project. Improvements made include:
* Providing academics with a choice of colours when annotating
* Annotations are no longer saved as screenshots; instead, the coordinates and colours of annotations are used to generate a string of characters, which are then decoded and re-drawn when viewing the document online at a later date
* Users can save, edit and undo annotations

To view a sample of the improved version, visit:

http://sonya.sonyasofya.co.uk/StylusMarking/home.php

* Developed a scheduling system for the final year project demonstrations, which involved the conversion C++ code to C#; both of these languages were new to me and the task helped me to become familiar with syntax of C#. This was a Scrum project, and new features were built onto the existing scheduling system. My major roles were to design and implement an algorithm that would sort academics by harshness when marking, which I later used to design and implement an algorithm that would match academics to potential partners, in the aim to enforce fair marking
* Acquired knowledge in normalisation, distributed databases, transactions and concurrency control, query processing and physical database design
* Have a working knowledge of web development in ASP.NET MVC, which I learnt in my spare time
* Selected by lecturers as the top-performing student, to give the Vote Of Thanks at the graduation ceremony to over 800 guests, fellow graduates and academics

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| Year | Weight (%) | Module | Mark (%) | Grade |
| 1 | 0 | Programming | 100 | A+ |
| Business Analysis & Solutions Design | 76 | A |
| System Environments | 68 | B+ |
| IT Toolbox | 94 | A+ |
| Gained 85% Weight of Degree: 0% | | | | |
| 2 | 20 | Programming | 83 | A |
| Databases & UML Modelling | 77 | A |
| Networking & Operating Systems | 72 | A- |
| Project Management | 76 | A |
| Gained 77% Weight of Degree: 16% | | | | |
| 3 | 80 | Programming | 85 | A+ |
| Advanced Databases & The Web | 89 | A+ |
| Dependable Systems | 68 | B+ |
| Dissertation | 77 | A |
| Gained 80% Weight of Degree: 64% | | | | |

Previous Education & Achievements

* Wallington High School for Girls, Grammar School, Sutton (September 6th 2010 – June 2014)

3 A-Levels (2014): Maths, Psychology, Biology

12 GCSEs (2012): Maths, Psychology, Biology, Physics, Chemistry, English Literature, English Language, Food Technology, Citizenship, ICT, French, Religious Studies

Activities/Societies: Maths Mentor (2012-2013)

* Old Palace of John Whitgift Independent School (January 2010 – July 2010)

UKMT Maths Certificate

Published a fifty-word story, *My Certificate* in a book

* Norbury Manor Business & Enterprise College (September 2007 – December 2009)

UKMT Maths: Gold Certificate, Best in School Certificate (2009), Silver Certificate (2008)

Activities/Societies: Tour Guide on Open Evenings, IFS Financial Studies

* Other Awards/Certificates: ISTD Dance Award | National Swim Level 5