Dario Russo

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Education

Queen Mary University of London September 2019 – May 2023
BSc (Hons) Computer Science with Industrial Experience
Predicted 80%+ first: **24 first degree** including: (**100% -** Fundamentals of Web Technology), (**85%** - Software Engineering), (**89% -** Algorithms and Data Structures), (**87% -** Web Programming), (**70% -** UX Design), (**predicted 80%+ -** Security Engineering)

Glenthorne High School September 2018 – June 2019
Achieved A Levels: **A** - Mathematics, **B** - Computer Science, **B** - Physics, **C** - Further Mathematics.
GCSE's: 4 - English Language

Kenton High School September 2016 – June 2018
GCSE's: **7 A* - B** including (**8** - Mathematics), (**4** - English Literatures)
BTEC: **m2** – Business Studies, ***2** - Engineering

Work Experience

BBC World Service Team – Trainee Software Engineer September 2021 – June 2023

- Collaborated closely with product managers, UX designers, and testers to ensure the maintenance of an accessible front-end for CMS News. This front-end application plays a vital role in facilitating the successful delivery of 44 news services worldwide.
- By actively pairing with other 2 junior software engineers, I successfully contributed to reducing the completion time of PRs by 10-20 minutes. Our collaboration focused on migrating the legacy component's library into the main repository's component folder, resulting in improved efficiency, and streamlined development processes.
- Took on the responsibility of experimenting with newly created component standards. My task involved refactoring two legacy promo components into a single compound component. This refactoring aimed to provide valuable feedback on the effectiveness of the new standards and demonstrate their benefits to the team. By making the code more reusable and readable, the refactored compound component served as a tangible example of how the new standards could enhance the team's development process.
- Through my advocacy and development efforts, I successfully implemented an indexing system for BBC documentation, which was previously scattered across different locations. This solution involved creating a centralized index portal utilizing storybook, which empowered every team member to swiftly locate and access the pertinent documentation they needed. As a result, we observed a significant boost in documentation engagement, coupled with a remarkable reduction in the time required to locate it.
- Implemented comprehensive unit tests using Jest and React Testing Library to achieve 100% code coverage for my authored code.

Queen Mary University of London – Teaching Assistant September 2020 – June 2021

- Providing hands-on guidance and support to first-year students during laboratory sessions for the *Computer Systems and Networks* and *Procedural Programming* modules.
- Created a standardized marking guide for the final coursework, ensuring consistent evaluation among teaching assistants.
- Responsible for evaluating and grading students' lab work and coursework, ensuring fair assessment and determining their pass or fail status accordingly.
- Throughout the session, I effectively managed the simultaneous marking of students' lab requests and questions by resolving 20-30 requests per hour.

Projects

Portfolio Website – *www.dariorussoblog.com* May 2023 – June 2023

- I created a portfolio website by leveraging the power of Next.js server-side rendering, Tailwind CSS for enhanced styling, and AWS Amplify for efficient serverless deployment.
- Obtained a perfect score of 100 in Accessibility, Best Practices, and SEO categories in Lighthouse web page auditing.
- Successfully improved page metadata and implemented dynamic sitemaps, resulting in a third-place ranking on average for the search term "Dario Russo Portfolio" in Google's Page Rank.

- Enabled effortless downloading of my application on iOS, Windows, macOS, and Android platforms by creating and exposing a *manifest.json* file, harnessing the power of Progressive Web App (PWA) technology.

News Aggregator with Bias detection AI – *Final Year Project Dissertation* May 2022 – May 2023

- Built a full-stack web application featuring a news aggregator with recommender systems and AI-powered bias detection.
- Conducted thorough research and successfully developed a deep learning algorithm that achieves a 66% accuracy in detecting news bias.
- Conducted extensive research and experimentation on Content-Based and Collaborative Filtering approaches for recommender systems. Deployed the methodology that yielded the highest Normalized Discounted Cumulative Gain (NDCG) as the optimal solution.
- Produced a 11,000-word publication and delivered a presentation to two examiners, securing a grade of 70%+ for my project.

Bid Website (eBay clone) – *Web Programming Coursework* September 2022 – December 2023

- Paired with other 3 university students to create an eBay clone using Vue.js for frontend, python Django for backend and deployed on OpenShift to achieve 86% score in the Web programming module's Coursework.
- Implemented Agile methodologies and created a Kanban board to lead the team, enabling clear task organization, and tracking of coursework objectives.
- Leveraged my experience as a Software Engineer at BBC to provide valuable assistance to my teammates with their task. By offering guidance support, and bug fix, I helped them enhance the quality of their code, ultimately leading to improved performance in the final application.
- Due to the unavailability of other students, I worked tirelessly for two consecutive days without sleep to debug and deploy our application. This dedicated effort led to an impressive 10% increase in our coursework grade.

3D Graphics Engine (Graphics Epi) – *Cube* May 2020 (1-week)

- Through dedicated self-learning, I developed a profound comprehension of the fundamental mathematical principles and intricate procedures necessary for the smooth functioning of a basic graphic engine. This in-depth understanding has provided me with valuable insights into the implementation of advanced graphical engines such as OpenGL, DirectX, or Vulkan.
- After 1-week period I succeeded at Constructing an asynchronous rotation of axis x and y over a wireframe cube placed at the origin and translated to the centre of the screen in Java.
- To gain insight on how to implement the task, I relied on YouTube's tutorials explained in C++, this resulted in an even more challenging and fun experience as I had no prior experience in C++ and had to rely only on the theory explained by the tutorial.

Legacy Portfolio – *Fundamentals of Web Technology coursework* January 2020 – April 2020

- I successfully designed and deployed a personal portfolio website, showcasing my abilities in HTML, CSS, JavaScript, PHP, and SQL. By leveraging GitHub and OpenShift, I deployed the website on university servers, resulting in a perfect score of 100% for the Fundamentals of Web Technology module.

2D Videogame – *Computer Science A-level OCR* September 2017 – March 2019

- To address the issue of student disengagement with mathematics, I developed a math-based videogame where character battles revolved around solving mathematical questions. This gamified approach aimed to make math more engaging and enjoyable for students, ultimately enhancing their learning experience and performance in the subject.
- Surveyed young students to identify their preferred videogame genre, revealing that the RPG 2D Game category was their top choice.
- Acquired the skills to implement a 2D tile-based videogame engine in Python by utilizing the Pygame library.
- Achieved an impressive 96% score from the OCR examination board by submitting a thorough 400-page PDF document. The document encompassed my problem-solving process, solution, pre-planning, and detailed explanation of the functioning of my code.

Technical Skills and Interests

Technical Languages – HTML (High), **CSS** (High), **JavaScript** (High), **Typescript** (High), **React.js** (High), **Next.js** (Moderate), **Python** (High)

Qualifications – Keysight Technologies Oscilloscope Fundamentals Program, ECDL

Interests – Piano, chess, cardistry, photography, and videogames. I always spend good quality times in these hobbies.