George Miller

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"I'm a British developer with a proven history of building scalable, efficient and secure distributed systems. I have always sought to push the boundaries of what is possible through greenfield projects. I thrive in environments where creativity and cross-functional collaboration deliver impactful solutions. Drawn to Berlin's dynamic tech scene, I am excited to contribute to the success of forward-thinking teams in Berlin."

Skills

○ **Backend development**
- Designed and built a microservice that reduced response times by more than 67%, despite handling more traffic. This also resolved rate-limiting issues by consolidating API calls, reducing CMS occurrences from 80,000 to 2,000 per month.
- Committed to writing scalable server-side logic, focused on minimising work done in the client. Mastered using TypeScript (Node.js) and Python, with experience using Go.

○ **Data Science and Machine Learning**
- Designed and led work on a Python data pipeline allowing users to run pre-trained machine learning models and visualize output datasets in a React frontend.
- Features included uploading custom datasets, parallel model execution, and user-defined data transformations.

○ **Frontend development**
- Strong skills in JavaScript, React, HTML, and CSS (vanilla and Tailwind).
- Track record in releasing successful features in collaboration with stakeholders using split tests.

○ **Relational Databases**
- Expertise in designing and implementing normalized SQL schemas.
- Managed SQL instances via the command line and connected such instances to APIs, for example, I created a process to automate the addition of new hotel and destination content to *OnTheBeach* powered by PostgreSQL.

○ **Infrastructure and Deployment**
- Containerized Web Applications using Docker and deployed them to AWS using Terraform, or using YAML Business Templates for deployment to Kubernetes.

Work Experience

January 2024– Present

Software Engineer, *On the Beach*, 5 Adair Street, Manchester.
○ Playing a key role in re-organising the backend, the GraphQL micro-service I led development of enabled parallel data fetching of CMS content and package data, significantly improving scalability and efficiency.
○ Collaborating with stakeholders to optimize SEO performance by autogenerating sitemaps, refactoring code to reduce client bundle size, and shifting to server-side rendering. Added metadata which accurately indexed the new Ireland site and de-indexed broken links. We have seen a 10% reduction in LCP (page load time) on the landing pages I worked on between January and December 2024.
○ Responsible for maintaining and enhancing the Next.js frontend application, introducing features such as sustainability badging and chatbot integration to enable large group bookings which are not possible in the existing booking system.

October 2022-
October 2023

Software Engineer, *Naimuri*, Capstan House, Salford Quays.

- First took a leading role in the alpha development of a comprehensive workflow tool using Typescript/Java microservices and React. We are proud to have secured successful customer funding to deliver a production solution.
- Then led the development of a data pipeline visualisation framework in Python using FastAPI, powered by in-house pre-trained machine learning models, and targeted at customer use cases including insider threat and organisational engagement.
- Gained valuable experience architecting greenfield distributed systems. Lived and breathed agile software engineering by iteratively adding value each sprint, then building on customer feedback. Embraced the can-do attitude of a small company by participating in internal hackathons and knowledge shares.

Sep 2021-
Sep 2022

Graduate Software Engineer, *BT*, Cheltenham Telephone Exchange.

- Quickly immersed myself into the routine of full-time software engineering. Projects I have worked on include a finance visualisation web application (JavaScript), Android security research and development, telecommunications software (C# ASP.NET) and hardware networking.
- Used data transfer techniques programmatically, such as SSH and JSON over HTTP to combine code running on different systems. This cemented my understanding of full-stack web engineering.

Formal Education

October 2020-
September
2021

MSc Computer Science, *University of Liverpool*, Distinction.

- Reading a Master's degree in Computer Science was an opportunity for me to pursue my passion for technology and also become better prepared to work in software engineering. Establishing a strong foundation in Computer Science theory in addition to Mathematics, by studying Data Structures and Algorithms in detail, has enhanced my ability to write efficient and scalable code
- Courses I enjoyed most are Data Mining with Visualisation and Bioinspired Optimisation; implementing Neural Networks and Reinforcement learning models in Python from scratch using NumPy arrays. Writing intelligent software that can autonomously adjust to user behaviour and make accurate predictions future-proofed my software mentality

September
2016- July
2020

BSc Mathematics, *University of Manchester*, 1:1.

- I mastered extracting information from numerical data and practised fitting regression models, analysing business processes and modelling financial markets
- Learned about machine learning techniques including Quadratic Discriminant Analysis and Hierarchical Clustering, but also other methods such as Time Series Analysis, Markov Chains and Randomised Controlled Trials. This involved fitting models, calculating statistics and using software to analyse datasets

Languages

- English: Mother tongue
- German: A1