

Matthew Raw

Email: mattraw57@gmail.com | Mobile: 07908631102

Education

09/2020 – present – University of Sheffield

- BSc Computer Science with a Year in Industry

09/2013 – 06/2020 – Nottingham High School

- A-Levels: Maths (A*), Physics (A), Biology (A). GCSEs: 8 A*s, 2 As.

Languages & Frameworks

- JavaScript, TypeScript, Java, React, NodeJs, Python, Ruby, Swift.

Employment

09/2023 – present – Home Office - Continued in my placement role, one day weekly, during my final year at university.

09/2022 – 09/2023 – Home Office – Placement Engineer

Completed a year's placement as a full stack developer working on a search application, improving and maintaining frontend and backend.

Technical skills and experiences:

- Enjoyed working with React, JavaScript and TypeScript, building attractive, interactive and type-safe UIs. Led to exploration and development with new and emerging technologies in personal time.
- Extended server-side functionality: working with RESTful APIs, fetching and handling data securely whilst maintaining efficiency and keeping costs to a minimum, by implementing caching and filter parameters.
- Used different database types (NoSQL, SQL, graph etc.) for best performance, depending on data structure, scalability, and query requirements.
- Gained hands on experience writing reusable and maintainable code following best practices including the SOLID principles.
- Proactively monitored and addressed security concerns by staying informed about industry-specific Common Vulnerabilities and Exposures (CVEs).
- Utilised cloud platforms such as Amazon Web Services (AWS) and Terraform.
- Involved in the whole software development cycle, from choosing cloud infrastructure resources, to design, implementation, testing, deployment, and maintenance.

Problem solving, troubleshooting and innovative working:

- Utilised test-driven development - crafted comprehensive unit, integration and end-to-end tests, ensuring features were deployed to production without disruption and functioning as intended. Utilised automated testing frameworks such as Cypress.
- Identified issues and bugs in code such as edge cases. Delivered improvements and adjustments; attending user feedback sessions helped understand changing needs.
- Witnessed the benefits of continuous integration and continuous delivery pipelines; worked with other developers to resolve conflicts caused by incremental changes.
- Monitored AWS resources - identified issues and implemented solutions.
- Resolved issues with load balancers by implementing a system to use a combination of alternative services to satisfy the requirements.

Working collaboratively in a team environment:

- Collaborated with team members of other professions, communicating complex ideas and concepts despite varying levels of technical knowledge.

- Worked as part of a team, learning new concepts from other developers, for example, abstraction and separation of concerns.
- Saw first-hand the benefits of agile methodologies, as well as iterative and incremental processes while using the Scrum framework, utilising sprints as well as other Scrum values and practices.
- Mentored an apprentice, guiding him in technical and soft skills, fostering problem-solving abilities and promoting his personal and professional growth.

01/2019 – 09/2022 – The Red Lion, Thurgarton – Barman and waiter

- Worked effectively and efficiently as part of a team to deliver excellent customer service. Giving the best experience possible helped create loyal customers.
- Developed strong communication skills, allowing me to quickly and concisely relay important information to both staff and customers.
- Learnt to resolve difficult situations, for instance, helping a dissatisfied customer, in a fast-paced and challenging environment. Management fostered a supportive and motivating working culture, something I have come to value.

Project Experience at University of Sheffield

Data structures, algorithms, machine learning:

- Coded a Naïve Bayesian classifier for sentiment analysis, using Python. This supervised machine learning algorithm used several types of data structures, selected on time and space complexity and intended functionality. Performance was evaluated based on metrics including precision, recall and F1 score.
- Implemented both Branch and Bound and A* search algorithms in Java to calculate the shortest path on terrain of varying height using object-oriented programming (OOP) concepts, including inheritance and creating functions, making code easy to understand and avoiding unnecessary code reuse.
- Developed a strong understanding of OOP and the concepts behind it such as encapsulation, abstraction, inheritance, and polymorphism. I achieved this through a practical and hands-on approach, including building a data analysis application.

Mobile development

Developed a mobile application using Kotlin. Learned how design patterns are used in software frameworks, how mobile applications differ from web applications, how data is processed in mobile applications and to efficiently use a device's sensors.

Agile Methodologies

- Worked collaboratively to develop an online mentoring platform using Ruby. Considered Extreme Programming's use of emergent design and pair programming.
- Studied the process of software development, from gathering requirements to maintaining a finished product, including software lifecycles such as the Waterfall model and agile methodologies which help negate the risks of such models.

Interests & Achievements

Sport: School and club cricket team member. Level One Cricket Scoring Qualification. Represented school and university at rugby.

Music: Grade 7 Saxophone, Grade 5 Music Theory.

Volunteering: volunteered at an allotment and at local schools as part of a Community Development programme.

Referees available on request.