Joe Baker

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Profile

Software Engineer with first class honours in software engineering from Bournemouth University, and have been working on Air Traffic Control training simulation software in both my placement and graduate roles.

Previous experience includes maintaining a large legacy C++ codebase, and developing supporting tools in Python and C#. Strong foundation in object-oriented design, testing, and debugging of complex, safety-critical systems. With Uni and personal projects, also have experience across Java, Kotlin, and Web technologies.

Currently looking to continue developing my skills as a software engineer, contributing to meaningful projects while expanding my experience with different technologies.

Experience

Software Engineer @ Micro Nav (2023-Present)

Graduate Software Engineer: 2025-Present
Software Engineering Placement: 2023-2024

- Designed and developed an internal automated testing tool in Python to during the creation and execution of nightly regression tests while on the Validation team.
- Investigated and fixed bugs and errors, ranging from minor to critical, across the companies C++ Air Traffic Control simulation software suite while on the Maintenance team.
- Worked with complex, safety-critical simulation software, following established development, testing, and review processes.
- Awarded *Highly Commended* by Bournemouth University for outstanding performance and contribution during industrial placement.

Education

Bournemouth University (2021-2025)

BSc (Hons) Software Engineering. Achieving first class honours.

- Dissertation & Final Year Project (2025): using Kotlin and Python, developed a Pedestrian Navigation App which focused on the safety of provided routes, receiving a 80% grade.
- Ubiquitous Computing (2024): using React Native, developed a QR/Barcode Scanner App receiving 95% and a Surf Forecast app receiving 90%.
- Application Programming (2023): using Kotlin, developed a Battleships App, getting a 92% grade.
- Web Programming (2022): using PHP and JavaScript, developed an eCommerce website, with a 91% grade.
- Application of Programming Principles (2022): using Python and JavaScript, created an eBook library website with REST API, receiving a 100% grade.

Brockenhurst College (2019-2021)

BTEC Level 3 Extended Diploma in IT at grade D*D*D* (Triple Distinction Star)

Technical Skills

- **Programming Languages:** Python, C++, Java, Kotlin, HTML, JavaScript, C#, PHP, and SQL
- **Design & Architecture:** OOP (Object Oriented Programming), UML (Unified Modeling Language), REST API (Representational State Transfer API), MVC (Model View Controller), EDA (Event-Driven Architecture)
- **Platforms:** Android, Linux, Windows, and Embedded Systems
- **Software:** Docker, Git, SVN, MS Office, VirtualBox, and various IDEs including Android Studio, Embarcadero Builder, Visual Studio, and VS Code

Professional Skills

- **Problem Solving:** Diagnosed and resolved critical C++ software issues and bugs, improving system usability and stability.
- **Adaptability:** Quickly understood and became productive across large unfamiliar codebases, tools, and technologies, learning approaches to contribute effectively with changing roles and projects.
- **Teamwork:** Collaborated with others both at Micro Nav and in university group projects, to share responsibilities and workloads, support teammates, and resolve issues, to achieve success.
- **Communication:** Presented updates and technical documentation, to both technical and non-technical audiences, while at Micro Nav and during university projects.
- **Time Management:** Balanced multiple tasks and deadlines while consistently meeting deadlines and staying on schedule.

References

Available upon request