

MATTHEW LOCKHART

Software Engineer
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EXPERIENCE

BAE Systems

Graduate Software Engineer (FCAS)

London, England

Aug 2025 – Present

- Develop, deploy and maintain Java and Spring Boot services within a security-centric defence software environment on a greenfield project.
- Work with GitLab repositories, CI/CD pipelines and Nexus repositories to manage source code, builds, dependencies and software artifacts.
- Contribute to code reviews, testing, debugging, technical documentation and Agile engineering activities.
- Integral part of the team that demonstrated the project to Managing Director level staff at BAE Systems Air/Digital Intelligence.

Technologies: Java, Spring Boot, GitLab, Nexus, Git, CI/CD, Agile

BAE Systems

Graduate Systems Engineer (GCAP)

Brough, England

Jan 2025 – Aug 2025

- Acted above my level during systems engineering activities for the Global Combat Air Programme sub-section the team was working on, helping communicate and translate stakeholder needs into structured engineering requirements.
- Applied model-based systems engineering practices to document system relationships, behaviours and interfaces.
- Collaborated with multidisciplinary engineering teams and contributed to technical reviews, documentation and issue resolution.

Technologies: MBSE, Systems Engineering, Requirements Engineering, Agile

PROJECTS

Screenshots and gameplay videos available upon request.

Identify Python, Twitter API, Flask, HTML/CSS/JavaScript, Scikit-Learn, SQLite, Bootstrap

Developed a machine-learning model using natural language processing and logistic regression to identify illegal wildlife trade on Twitter. Collected live tweet data through a custom Twitter API scraper and presented the results through a Flask website with a Python back end and SQLite database supporting user registration, authentication and account information.

Black Tide: Forsaken C#, Unity, Game Systems, Level Design

Developing an open-world action RPG as part of a two-person team, taking responsibility for gameplay programming, systems architecture and level design. Engineered modular systems for player movement, interaction, inventories, item containers, quests, conditions and effects, environmental events, UI, audio and world simulation. Applied component-based, interface-driven and data-oriented design principles so that new items, quests, interactions and narrative content can be added through reusable configurations rather than bespoke code. Designed and built a historically and geographically open world containing settlements, explorable interiors, terrain, vegetation, dynamic lighting, weather and tidal environments. Profiled and optimised the game using occlusion culling, level-of-detail systems, instancing and structured content workflows to maintain performance while supporting continued expansion.

ASP.NET Core Web API C#, ASP.NET Core, SQL Server

Created an API demonstrating user authentication, authorisation and other back-end functionality. Created and managed a SQL Server database for user accounts, logs and archives using CRUD database techniques.

Cloth Simulation Rust, C++, CUDA, GLFW

Created a soft-body cloth simulation in both Rust and CUDA hosted through C++. The project demonstrated multithreaded simulation on both CPU and GPU hardware, with the results rendered using GLFW.

Meat-Man C#, OpenGL, .NET, OpenTK

Created a 3D Pac-Man-style game using a custom-built C# and OpenGL engine. Developed modular AI, rendering, physics, audio and gameplay systems using component-based architecture. The game demonstrated the engine's suitability for developing future projects.

EDUCATION

University of Hull

BSc (Hons) Computer Science, *First-Class Honours*

Hull, England

Sep 2021 – Jul 2024

SKILLS

Languages: Java, C#, C++, Rust, CUDA, Python
Frameworks: Spring Boot, Flask, .NET, ASP.NET Core, Bootstrap, Unity Netcode for GameObjects
Tools: Git, GitLab, Nexus, CI/CD
Databases: SQLite, SQL Server
Libraries: OpenGL, OpenTK, GLFW, Scikit-Learn
Engineering: Agile, MBSE, Systems Engineering, Requirements Engineering, Jira, Confluence
Engines: Unity

ADDITIONAL QUALIFICATIONS

Full UK driving licence with own transport

Beginner proficiency in Swedish