

MATTHEW LOCKHART

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EXPERIENCE

BAE Systems

Graduate Systems Engineer

Brough, England

Starting - Jan 2025

PROJECTS

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

Developed a Machine Learning Model using Natural Language Processing (Logistic Regression) to identify illegal wildlife trade taking place on Twitter using live tweet data via a custom Twitter data scraper using Twitter API, hosted on a website developed with Flask utilizing a Python written back-end with an SQLite database for user sign-up, authentication, and user-information.

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

Created an API with various functionalities showcasing user authentication, authorisation and other features. Created and managed a SQL Server in an ASP.NET Web API for user accounts, logs, and archives utilising CRUD database techniques.

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

Created a 3D Pac-Man style game using a custom-built engine (C# + OpenGL) with modular systems such as AI, Rendering, Physics, Audio, and other gameplay mechanics using component-based architecture. The Pac-man clone was built to demonstrate the engine's usability in developing future games.

Cloth Simulation *Rust, C++, CUDA, GLFW*

The soft body simulation was created in both Rust and CUDA hosted from C++ to demonstrate the ability of implementing a multi-threaded project on both the CPU and GPU. The simulation is rendered using GLFW.

Sudoku Solver *C++*

A project using C++ that solves valid sudoku problems programatically. This project solves 9x9 sudoku's in around 20 Microseconds..

CTF *Unity, C#, Agile*

A project developed using Unity and managed using Agile methodology. I created a local multiplayer 2D Capture the Flag game with a map based upon the University of Hull campus.

Portfolio Website *HTML/CSS/JavaScript, Bootstrap*

www.matthewlockhart.co.uk

Developed an online portfolio further detailing my experience/projects/qualifications.

Enter the Dungeon *Lua, Game Dev*

A project focused on creating an engaging, multiplayer obstacle course game using Lua scripting for game logic including a variety of obstacles, player controllers and persistent player data using industry standard CRUD database techniques.

EDUCATION

University of Hull

Bsc (Hons) Computer Science *GPA: 1st Class Honours*

Hull, England

Sep 2021 - Jul 2024

Hill House School

A-Levels Business Studies, Classical Civilisation, Economics, EPQ

Doncaster, England

Sep 2018 - Jul 2020

Hill House School

GCSEs 10 (A-C) Including Higher Math, English, Computing and Triple Science

Doncaster, England

Sep 2007 - Jul 2018

SKILLS

Languages: C#, C++, Rust, CUDA, Python, HTML/CSS, Structured Text
Frameworks: Flask, .NET, MLAgents, ASP.NET Core, Windows Forms, Bootstrap
Databases: SQLite, SQL Server
Libraries: OpenGL, OpenTK, GLFW
Engines: Unity

ADDITIONAL QUALIFICATIONS

Beginner proficiency in Swedish

Driving license with own transport