

Rhys Alexander

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EDUCATION

UNIVERSITY OF BIRMINGHAM

BSc IN ARTIFICIAL INTELLIGENCE
AND COMPUTER SCIENCE

Birmingham, UK | Sep 2022 - Jul 2025

ST. DAVID'S COLLEGE

A LEVELS:

MATHS A*

COMPUTER SCIENCE A*

PHYSICS A*

Cardiff, UK | Aug 2019 - Jun 2021

Achieved an A* on every module.

One of few selected for an honours
program, a course on PPE.

SKILLS

SOFT SKILLS

STRONG LEADER

Lead teams at CodeNinjas and SpotVR

EFFECTIVE COMMUNICATOR

Presented University Lectures

BILINGUAL

English and Welsh

TECHNICAL SKILLS

Python • Java • JavaScript

OpenCV • Numpy • TensorFlow

HTML • CSS • SQL

AI and ML • Linux • Git

WORK EXPERIENCE

CODENINJAS | HEAD TECH

Cardiff, UK | May 2022 - Sep 2022

- Trained staff to code and articulate concepts in ways beginners could understand.
- Taught programming, primarily JavaScript, to students between 6 and 14.
- Created and facilitated week-long summer camps for students on programming games in Python, web development with JS/HTML/CSS, and modding Minecraft. Including training staff to for these camps.
- Wrote a job specification and interviewed candidates for new positions.

SMART EDUCATION WALES | PYTHON TUTOR

Remote | Jul 2022 - Oct 2022

- Prepared content and taught Python programming.
- Taught students with no previous experience to write clear, clean, and efficient Python programs.
- Effectively communicated sophisticated programming concepts to complete beginners.

GROUP PROJECTS

SPOTVR | TEAM LEAD

Python, WebXR, A-frame, JavaScript

- Awarded a research grant to develop a module for the Boston Dynamics Spot robot such that it can be controlled from anywhere using VR.
- I lead the team of 5 and developed the software.

EUROBOT | LEAD SOFTWARE ENGINEER

Link | Python, OpenCV

- Member of the University of Birmingham's robotics team, we built a robot to compete in the Eurobot competition, I was responsible for software.
- Developed a central tracking system using Python and OpenCV, it created a virtual birdseye of the board.
- Programmed solutions to complete tasks including pathfinding, object detection, and obstacle avoidance.

PERSONAL PROJECTS

SORTING ALGORITHM VISUALISER [GITHUB](#) | PYTHON, PYGAME

- Implemented Insertion Sort, Bubble Sort, Merge Sort, and Quick Sort.
- Sort in ascending or descending, pause and play, control speed and number of items.

FACE RECOGNITION [GITHUB](#) | PYTHON, TENSORFLOW

- Encodes images as recognisable faces.
- Identifies known and unknown faces from the camera stream or static images.

NEAT AI FLAPPY BIRD [GITHUB](#) | PYTHON, NEAT, PYGAME

- Trains a NEAT neural network to beat the game, inputting obstacle distance data and outputting player inputs.

SUDOKU GENERATOR AND SOLVER [GITHUB](#) | PYTHON, JAVA

- Generates random Sudoku problems with a unique solution using a recursive backtracking algorithm.
- Solves or verifies any Sudoku problem.