

Andrew Swarbrick

+44 7443 629397
Andrewoswarbrick@hotmail.co.uk

EDUCATION

BSc Computer Science - Cardiff University

September 2021 - July 2024

Grade: 2:1

Including (not limited to):

- Principles, Tools and Techniques for Secure Software Engineering
- Communication Networks
- Large Scale Databases
- Security

A-levels - Coleg Gwent

September 2019 - June 2021

- Computer Science - A*
- Physics- A
- Mathematics - B
- Welsh Baccalaureate - A

EXPERIENCE

Software Engineer - Copner Biotech

Sept. 2024 - March 2025

- Sole developer on team
- Redesigning CAD software for 3D & 4D bioprinters
- Software written in Javascript as a Single Page Application for most portability
- Front-end developed with Vue.js to create interactive and responsive UI elements for us with editing geometries.
- Voxelize meshes to export to proprietary GRAPE format

PROJECTS

Personal Security System for a Night Time Economy

Part of Degree

- Team of 8 (later 7)
- Android app in Java
- TLS for secure HTTP requests
- Focused on Java development, with minor contributions to the Flask (Python) server
- Tracks users along chosen journey using HTTP APIs and Embedded google map
- SMS messages to chosen contacts if user deviated
- Achieved final grade of 86%

Automated Cyber Defence Through Deep Reinforcement Learning

Part of Degree

- Individual Project
- Used TTCP CAGE Challenge 2 gym environment
- Written in Python
- Study of a recurrent structure on performance
- PPO models for blue agent
- Used Stable Baselines 3 to make PPO models
- Red agent modified change strategy randomly
- Models tuned with Optuna
- Results inconclusive
- Achieved final grade of 80%

REFERENCES

Available on request.

TECHNICAL SKILLS

Tools and technologies:

- Microsoft Office
- Git
- Android Studio (IDE)
- Bash scripting (limited)
- Stable Baselines 3
- Three.js
- Vue.js

Operating Systems (Not Certified):

- Linux
- Microsoft Windows

PROGRAMMING LANGUAGES

- Python
- Java
- HTML + CSS
- JavaScript
- SQL (limited)
- MongoDB (limited)