

Rajveer Singh Sandhu

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PERSONAL PROFILE

I am a Cyber Security student with a strong foundation in emerging technologies, focused on robust, testable software. Drawing on experience across the UK Defence ecosystem, I turn complex risks into production ready solutions with a focus on secure development practices. I'm excited to work on dependability-first designs, strengthening functional safety and global reliability.

EDUCATION

2023 - 2027 BSc Cyber Security at **The University of Warwick**

(Working at Grade: 2:1)

- Explored how to **design, build and maintain** secure systems.
- Analysed & Secured **enterprise-scale networks, databases and web applications**.

PROJECTS

Go-Search-Engine | [GitHub](#)

Search Engine

A lightweight, self-hosted “go links” server that replaces bookmarks with URL shortcuts.

- Maintained with CI/CD enforcing security & functionality.
- Integrated Opensearch support for dynamic searching.
- Full docker support and maintenance.

Technologies: Python (Flask), Opensearch, SQLite, git

Personal Project

GOatpad | [GitHub](#)

Text Editor & Language Server

Vim-like text editor built using Golang and c++.

- Hardened every feature with thorough testing.
- Implemented PR-level AI Code reviews with feature branches.
- Developed a modular Language server with IDE features.

Technologies: Golang, C++, Graphite, git

Personal Project

Qiboopt | [GitHub](#)

Qibo.science | Documentation

Suite of tools for building optimisation circuits.

- Implemented a range of QAOA types & examples.
- Made use of OOP principles to foster maintainable code.
- Added a full set of tutorials to develop my own knowledge.

Technologies: Python (qibo), Qiskit

Open Source

Powered Learning

Study Planning Web App

Webapp that uses my [Subject-Recommender](#) to generate dynamic study plans with subject performance and biases.

- Helps those with exam anxiety to choose what to study.
- Harnesses large datasets with a complex weighting system.
- Deploys dynamic job queues to handle many API requests.

Technologies: Elixir, Phoenix, SQLite, Python

Future Product | [GitHub](#)

EXPERIENCE

UK Software-Delivery Company Security Engineering Intern

June 2025 — September 2025

Team Software Development project to build a python client for a mobile service using capture data.

- Headlined consistent meetings with seniors and team members to discuss progress.
- Followed key agile principles while working with delivery teams to ensure business compliance standards.
- Maintained and Expanded core business infrastructure to expand testing capabilities.

Technologies: Source Control, JIRA, Gitlab, Python, MitmProxy, ProxMox, Unix Networking

QinetiQ Cyber Summer Intern | Quantum Capabilities Researcher

June 2024 — September 2024

Researched and evaluated upcoming quantum computing technologies for use within the UK Defence sector.

- Constructed and presented a report on the viability of Quantum Photonics for machine learning algorithms.
- Developed QAOA solutions to solve binary optimisation problems, with applications within the national defence sector.
- Investigated and realised the potential of a multitude of quantum computing technologies.

Technologies: MATLAB, Python (Numpy, Pandas, PyTorch), Qiskit SDK, OpenQASM 2.0

SKILLS & INTERESTS

Languages: Python, C#, Go, C++, SQL (sqlite, SSMS), Elixir (Beginner)

Other Interests: Digital Photography, Reading, Hiking, Baking, Retro tech restoration