David Rosental

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EDUCATION

University of Warwick　　　　　　　　　　　　　　　　　　　　Coventry, UK
Computer Science, MEng – Expected 1st Class Honours　　　　　　*Sep. 2023 – Present*
- Studied optional modules: Web Development Technologies, Computer Security, Data Analytics, AI

Hill's Road Sixth Form College　　　　　　　　　　　　　　　Cambridge, UK
A Levels – Maths, Further Maths, Computer Science, Physics + EPQ (4A* + A)　　*Sep. 2021 – Jun. 2023*
- Ranked within Top 50 scores for AQA A Level Computer Science nationally.

EXPERIENCE

Software Engineering Intern (*Full-Time*)　　　　　　　　　Jun. 2025 – Sep. 2025
Vectric Ltd　　　　　　　　　　　　　　　　　　　　　　*On-Site (Alcester, UK)*
- Developed WebSocket-based communication with CNC machines using the Web Serial API (Javascript), enabling real-time manual/script-based control via web browser using G-code.
- Built an interactive toolpath visualiser (React + Three.js) for 3D simulation and debugging of G-code scripts.
- Implemented spiral pocketing toolpath algorithm (C++) for high-speed pocket machining, significantly reducing machining time.

Junior Software Developer (*Part-Time*)　　　　　　　　　Mar. 2021 – Sep. 2023
Green Pyrus Ltd　　　　　　　　　　　　　　　　　　　*Remote (Cambridge, UK)*
- Developed a suite of bespoke utility software to automate tasks to improve productivity. Created an intuitive UI with PyQt5, which was later ported to web-based UI.
- Developed library utilising websockets and multi-threading to securely transmit data from a stream to a web UI.
- Built a REST API (ASP.NET Core) to interact with inventory data through a standard interface and corresponding frontend (React + TypeScript). Used AWS Lambda to synchronise inventory data across marketplaces.

PROJECTS

Personal Portfolio | *TypeScript, HTML, CSS, React*　　　　　Mar. 2024 – Jun. 2024
- Static website to showcase my existing projects and certifications using React. (davidrosental.co.uk)

Blog Application | *TypeScript, React, Firebase, Go, REST, S3, MongoDB*　　Jun. 2025 – Present
- Full-stack application with React for the frontend and a RESTful backend that uses Amazon S3 and MongoDB to store blog posts with Firebase for authentication.

COURSES

Cloud Fundamentals: AWS Services for C# Developers | *AWS, C#*
- Practical introduction to .NET AWSSDK for a variety of AWS services including S3, Lambda and Secrets Manager

REST APIs in .NET | *C#, ASP.NET Core, REST, Docker*
- Full course on all generally relevant aspects of REST API design including basic and advanced CRUD techniques (versioning, HATEOAS, Swagger, caching, health checks), authentication/authorisation, and user-specific actions.
- Also contained .NET-specific features including SDK generation using the Refit package, and converting from Controller-based APIs to Minimal APIs.

Docker for Developers | *Docker*
- Explanation and demonstration of fundamental Docker commands, Dockerfile syntax, utilising Compose.
- Docker networks (and how they relate to Compose), Docker bind mounts/volumes/tmpfs, and image security with using non-root users and image scanning with `docker scout`.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, Go, SQL (Postgres + MySQL), JavaScript, TypeScript, HTML/CSS
Frameworks: ASP.NET Core, React, jQuery, Express.js, Flask, Gin-Gonic
Databases: MySQL, MariaDb, Postgres, MongoDB
Developer Tools: Git, Docker, Postman