

ABDULRAHMAN SULTAN

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TECHNICAL SKILLS

Core Skills: Python, JavaScript, HTML/CSS, SQL, Bash

Backend: Flask, FastAPI, PostgreSQL

Frontend: Chart.js, OpenLayers

DevOps / Infra: Docker, Docker Compose

Tools: Git, VS Code

Concepts: pathfinding, spatial indexing, geospatial routing, REST APIs

PROJECTS

Crest – **Hiking Route Planner** | *Python, Flask, JS, Docker*

Jan 2024 – Present

- Built a full hiking route planner with elevation-aware routing, GPX/GeoJSON export, and real-time map rendering.
- Designed and engineered a custom A* pathfinding engine from scratch, integrating KD-Tree spatial indexing to achieve sub-millisecond geospatial queries on datasets of 1M+ nodes.
- Achieved **93% pathfinding success rate** across beta testing with an average route calculation time of **80.6 ms**.
- Architected a containerised (Docker) deployment framework, enabling seamless multi-platform portability across Raspberry Pi 5 and production VPS environments via Cloudflare networking.
- Developed a responsive frontend using OpenLayers and Chart.js to render real-time elevation charts, interactive topographic maps, and seamless user UI transitions.
- Grew early traction: 60K+ Reddit views, 20+ beta testers, and active community interest.

EXPERIENCE

Community Software Contributions

Jun 2026 – Present

Meetwise AI Dashboard

Remote / GitHub

- Designed and merged a modal confirmation workflow using semantic HTML5 `<dialog>` tags to prevent accidental user logouts
- Refactored legacy inline UI styles into native CSS pseudo-classes (`:hover`, `:active`), removing redundant JavaScript event listeners and improving rendering performance.
- Contributed verified patches to the public repository, successfully passing 100% of automated linting and CI build pipelines

Community Software Contributions

Jan 2026 – May 2026

Accounting & Invoice Management Platform

Remote / GitHub

- Developed a global keyboard event-listener utility to handle modal states via the Escape key, ensuring strict compliance with web accessibility (a11y) standards.
- Audited and patched client-side runtime race conditions within an external React codebase to ensure stable, predictable UI rendering profiles.

EDUCATION

University of Manchester

Manchester, UK

BSc Computer Science with an Integrated Foundation Year

2026 – 30

Runshaw College

Leyland, UK

A-Levels: Computer Science, History, Biology

2024 – 2026