

Affan Khan

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EDUCATION

University of Manchester

BSc Computer Science and Mathematics

- First Class: Year 1 (81%) and Year 2 (76%).

Manchester, UK

Sep 2023 – Jun 2027

Heckmondwike Grammar School | A-Levels: Maths (A*), Further Maths (A*), CS (A), Physics (A)

2021 – 2023

RELEVANT EXPERIENCE

Amazon

Software Dev Engineer Intern

London, UK

Jul 2026 – Oct 2026

- Shipped full-stack features for an internal Remote Access Console used by ~500 clients to test and debug Prime Video on remotely managed devices.
- Automated Fire TV sign-in and remote-control workflows, reducing a key test setup process from 2–5 minutes to 10–20 seconds and removing repetitive manual steps.
- Built device-interaction and diagnostic tooling using React, TypeScript, Python and AWS services including AppConfig, S3 and CloudWatch, with an emphasis on reliable remote testing.

Electronic Arts (EA)

Software Engineering Intern

Southam, UK

Jul 2025 – Jul 2026

- Owned engineering and maintenance of EA Racenet, a companion platform serving 1M+ players worldwide, across web, backend and mobile applications.
- Initiated a rewrite of the Racenet React web application, improving visualiser rendering performance by ~70% and reducing ~70% of legacy dependencies.
- Upgraded the Racenet mobile app's internal framework, addressing breaking changes and native iOS/Android issues, and collaborating with QA to prepare release builds.
- Designed and built internal tooling to consolidate analytics data from multiple sources, enabling efficient information sharing across teams; collaborated with design and DevOps on deployment.

UniCS Hackathons

Technical Lead

Manchester, UK

Jan 2025 – Apr 2025

- Led development of web apps and technical tooling for university hackathons, coordinating team, code reviews and technology delivery for Student Hack 2025 (150+ attendees).

PROJECTS

Atlas | AI Agent Orchestration, TypeScript, Node.js, PostgreSQL, Swift, WebSockets, Docker, MCP

- Built a self-hosted personal platform that unifies data, knowledge and workflows, providing persistent context and tooling for AI agent orchestration through the Model Context Protocol (MCP).
- Architected a distributed system with a PostgreSQL-backed control plane, React web client, separate device nodes connected through a versioned WebSocket protocol, and Cloudflare R2 for file storage.
- Enabled secure remote file, Git and Unity workflows through per-node authentication, capability-based routing, restricted filesystem access and auditable operations.
- Developed a native SwiftUI macOS menu-bar controller and deployed the backend and database to a Linux VPS with Docker, Caddy, Auth0 and GitHub Actions.

Football Match Simulation Engine | C#, SQL, .NET

- Built a football match engine using C# producing in-depth result metrics with probabilistic analysis.
- Implemented statistical modelling using probability distributions and continuous random variables to generate realistic match outcomes.
- Integrated API-sourced data into an SQL database containing 98 teams and 3,000+ players.

What If? - Hackathon Project | React, JavaScript, Three.js

- Developed a React-based Chrome extension that transforms Wikipedia articles into interactive alternate-history scenarios using AI agents and Three.js animations.
- Awarded first-place prize for Best Use of AI Agents from 50+ submissions.

TECHNICAL SKILLS

Languages: TypeScript, Python, Java, C#, Swift, Kotlin, SQL

Technologies: React, React Native, Node.js, .NET, PostgreSQL, AWS, Docker, Git, GitHub Actions

OTHER EXPERIENCE

Sports Journalist

GIVEMESPORT

Remote

Aug 2024 – Jun 2025

- Published 500+ football news and editorial articles, generating over 3 million views.