

Dalex Davis

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PROFILE

I'm a Computer Science student with hands-on experience in full-stack development, IoT systems, and cloud infrastructure. Currently working part time as an R&D Software Developer at FreeFlush, where I transitioned from a summer internship into a continued part-time role building IoT-cloud integrations using AWS services and delivering modern web and mobile solutions. Also employed as a Computing & Mathematics Lab Demonstrator at Manchester Metropolitan University, mentoring students in programming fundamentals and best practices.

Skilled in React (Next.js), React Native (Expo), TypeScript, Python, Java, and C++, C#, with practical knowledge of relational and NoSQL databases (PostgreSQL, MySQL, MongoDB, Firebase etc..) and scalable backend architectures (Spring Boot, Express.js, Docker, AWS, Firebase, Appwrite). Passionate about emerging technologies, I've built personal projects ranging from geospatial security applications to social media platforms, and I also manage the website for my family's business. Demonstrating a strong ability to deliver practical, real-world solutions across diverse domains.

EDUCATION & QUALIFICATIONS

Manchester Metropolitan University - BSc (Hons) Computer Science 2024-2027

First Year:

- Achieved First-Class Honours
- Relevant Courses: Computer Architecture, Databases, Programming, Mathematics for Computing, Team Project, Graduate Skills, Web Development

Manchester Metropolitan University - Computing and Mathematics Foundation 2023-2024

- Achieved First-Class Honours
- Relevant Courses: Computing, Numeracy and Data Analytics, Mathematics, Skills for Higher Education

Bhartiya Vidya Bhavan's Vidya Mandir 2020-2022

- Higher Secondary School Certificate Course: BIO-IP
- Subjects: Biology, Physics, Chemistry, Informatics Practices, English
- Grade: (Overall): 75%

WORK EXPERIENCE

Department of Computing & Mathematics Lab Demonstrator | Manchester Metropolitan University Aug 2025 to Present

- Assist students in understanding programming concepts and principles across multiple languages.
- Support debugging, troubleshooting, and code review during lab sessions.
- Guide best practices in software development and problem-solving approaches.

R&D Software Developer | FreeFlush Water Management Jul 2025 to Present

- Continuing the project I began during my internship on a part-time basis, collaborating with the team to build out and improve the software infrastructure fully.
- Built and maintained modern web and mobile applications using React (Next.js) and React Native (Expo), integrating AWS and Appwrite services.

- Designing and implementing a water waste monitoring system with AWS IoT Core, AWS API Gateway, and AWS Lambda for serverless processing.
- Building a Next.js dashboard for real-time monitoring and analytics.
- Developing a React Native(Expo) mobile application and a main dashboard with React(Next.js) with Appwrite-based auth and backend services

VOLUNTARY WORK

Course Representative | The Union, Manchester Metropolitan University

Nov 2024 to Present

As a Course Representative for the Computer Science Department, I advocate for my peers by facilitating communication between students and faculty. I provide support, address concerns, and contribute to improving the curriculum and overall student experience, ensuring it meets the needs of my fellow students.

PROJECTS

CityNoise (Personal Project)

- Mobile app built with React Native (Expo) and TypeScript.
- Backend architecture uses AWS Lambda (serverless compute, Docker), AWS S3 (object storage), and Appwrite for authentication and database services.
- Integrates multiple backend microservices for noise data ingestion, processing, and analytics.
- Currently in active development, deployment pipeline planned for production release.

Ally App (AWS Breaking Barriers 2026 - Manchester Finalist)

- Built Ally, a companion mobile app for uKind's VR platform, alongside teammates from Evri and Deloitte.
- Delivered an MVP that broadened accessibility and solved key user pain points beyond the VR-only approach.
- Strengthened my experience with enterprise grade tools and collaborative workflows.
- Reached the Manchester finals and delivered an MVP that uKind can continue developing.

Asphira (Personal Project)

- Location-aware mobile app using React Native and geolocation APIs to retrieve crime data.
- Processes API data to calculate real-time safety scores and generate actionable safety recommendations.
- In closed testing, need to fix API level issues prior to public deployment.

Sportscar Hub (Personal Project)

- Backend API built with Java (Spring Boot), containerised with Docker.
- Data ingested from CSV (Kaggle) into PostgreSQL hosted on Railway.
- Backend is deployed as a RESTful web service on Render; frontend interface is built for API consumption and interaction.

NeuroBloom (Microsoft Hackathon)

- Prototype built with Next.js integrating AI APIs to deliver personalised learning resources
- Designed to operate in low-resource environments for inclusive education access.
- Early-stage proof of concept; no production deployment.

Simple Stock Management System (CS50 Harvard Online Certificate)

- Web-based inventory tracking system built with Python (Flask), HTML, CSS, and SQLAlchemy.
- Implements stock level monitoring, sales data logging, and basic inventory forecasting.

Library Management System (Personal Project)

- Desktop application with Java backend, Java Swing UI, and MySQL database integration.
- Supports CRUD operations for books, members, and transactions.

Other Projects, etc.

I have developed several smaller projects to strengthen my skills, including a Number Recogniser using TensorFlow, an AI Chatbot and a simple Neural Network following Andrej Karpathy's tutorials. Additionally, I created a Weather App using the OpenWeather API and built small React Native apps to improve my mobile

development skills. These projects helped me gain a deeper understanding of AI, React Native, and various programming concepts. All my projects(public) are available in my GitHub account

<https://github.com/theDALEX>

Technical Skills

- **Programming Languages:** Python, Java, TypeScript, SQL, HTML, CSS, C++, C#
- **Frameworks & Tools:** React Native, Expo, Next.js, Flask, SQLAlchemy, Spring Boot, Express.js, Firebase, Appwrite, Docker, AWS
- **Databases:** PostgreSQL, MySQL, MongoDB, NoSQL (Firebase, Appwrite, dynamoDB)
- **Development:** Experience in building apps, websites and simple games
- **Version Control & Collaboration:** Git, GitHub, Agile principles

Professional & Transferable Skills

- **Research & Technical Planning:** Conducted in-depth research to evaluate tools, frameworks, and architectures; developed migration strategies for changing tech stacks in ongoing projects.
- **Project & Team Management:** Create development plans, coordinate with teammates, and ensure timely project delivery.
- **Problem-Solving:** Apply analytical thinking to resolve technical challenges, resource constraints, and API limitations.
- **Time Management:** Balance professional responsibilities, academic work, and personal projects efficiently.
- **Adaptability:** Rapidly adjust to changing requirements and technologies in dynamic environments.
- **Communication:** Deliver clear technical explanations, feedback, and documentation for both technical and non-technical stakeholders.
- **Attention to Detail:** Maintain precision in code, UI/UX design, and system configuration for high-quality outcomes.
- **Leadership:** Lead university and professional team projects, assigning tasks and ensuring progress toward objectives.
- **Basic Business Skills:** Accounting, financial literacy, marketing, and business fundamentals applied in project planning.

ADDITIONAL INFORMATION

Languages – English (IELTS: 7)

INTERESTS

Technology and Innovation: Passionate about exploring emerging technologies and their applications in various industries. Enthusiastic about keeping up with tech trends and scientific breakthroughs.

Economics and Business: Keen's interest in understanding economic principles and their impact on business strategies. Enjoy analysing market trends and consumer behaviour to identify opportunities for growth and innovation.

Entrepreneurship: Motivated by the dynamics of startups and small businesses. Interested in the challenges and opportunities of launching new ventures, including business planning and financial management.

REFERENCES

Vix Connolly | TGI Fridays, Sale, Manager

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