Dalex Davis

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PROFILE

Computer Science student with experience in full-stack development, cloud infrastructure and IoT systems. Skilled in React (Next.js), React Native (Expo), TypeScript, Python, Java, C++, and C#. Experienced with PostgreSQL, MySQL, MongoDB, Firebase, etc., alongside backend development using Spring Boot, Express.js, Docker, AWS, Firebase, Amplify, and Appwrite. Currently working as an R&D Software Developer at FreeFlush and as a Computing & Mathematics Lab Demonstrator at Manchester Metropolitan University.

EDUCATION & QUALIFICATIONS

Manchester Metropolitan University - BSc (Hons) Computer Science   2024-Present
First Year:
- Achieved First-Class Honours
- Relevant Courses: Computer Architecture, Databases, Programming, Mathematics for Computing, Team Project, Graduate Skills, Web Development

Second Year:
- First-Class grades in Networks, Algorithms, and Data Structures and Industry Engagement in Semester 1

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%

EXTRACURRICULAR

Future Leader Pathway (Rise), Professional Futures Graduate Academy – Manchester Metropolitan University | 2024–Present

Part of a one-year extracurricular leadership programme alongside my degree, developing skills in strategic thinking, decision-making, project management, and leadership in business and innovation contexts.

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.

R&D Software Developer Internship | FreeFlush Water Management   Jul to Sep (2025)

- 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.

HACKATHONS & COMPETITIONS

The BIG Science & Engineering Challenge 2026

- Our product, Commonwealth Games+ app, won First Prize
- The app to boost engagement with live voting and other gamified interactive features.
- Integrated safety tools using crowd data for real-time attendee management.

AWS Breaking Barriers Challenge 2026

- We partnered with UKind Charity to develop Ally, an AI companion app for a VR headset, which reached the finals.
- The app works with VR to deliver virtual therapy sessions using AI, providing a cost-effective solution that reduces long wait times for patients.

PROJECT

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 available on both iOS and Android. You can check out the official website at: https://citynoisepage.vercel.app/

Mini Database (Personal Project)

- Mini Database is an ongoing project to build a database system from scratch in C++.
- The project begins at a higher level using standard C++ components, with the goal of eventually implementing a full-featured database entirely from scratch.

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.

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.

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#, bash scripting

- **Frameworks & Tools**: React Native, Expo, Next.js, Flask, SQLAlchemy, Spring Boot, Express.js, Firebase, Appwrite, Docker, AWS, Amplify

- **Databases:** PostgreSQL, MySQL, MongoDB, NoSQL (Firebase, Appwrite, dynamoDB)

- **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 & Innovation:** Exploring emerging technologies and their applications across industries.
- **Economics & Business:** Analysing market trends, consumer behaviour, and business strategies.
- **Entrepreneurship:** Passionate about startups, venture creation, and business planning.
- **Art & Creativity:** Appreciating visual arts and creative expression.

REFERENCES

Michael Jones | Manchester Metropolitan University, Lecturer
Contact: Michael.Jones@mmu.ac.uk