**JAMES ANDREW**

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Personal summary

I'm a software engineer at BuildChorus, where I work as a full-stack developer, constantly improving and adding features to our construction management SaaS platform. I love tackling creative challenges to make the system more state-of-the-art. In my spare time, I'm building a cryptocurrency exchange focused on stablecoins - essentially, a digital currency exchange that avoids the volatile price swings of Bitcoin by focusing on dollar-pegged coins. My academic background brings a unique mix: an MSc in Computer Science covering everything from ethical hacking to web development, plus a biology degree with a deep experience in microbial genomics and protein analysis. What drives me is learning new ways to solve problems - I'm the type who won't stop until I find a solution, and I genuinely love challenges that require creative thinking.

Professional Experience

Software Engineer, 09/2025 - Current

BuildChorus – buildchorus.com

* Developed full-stack features using Django backend and PostgreSQL database
* Built user configurability features for material procurement strategies
* Deployed applications using Docker containers on Google Cloud Platform
* Collaborated with the development team using GitLab and Jira workflows
* Worked with large PostgreSQL test databases to validate software functionality

Tech Stack: Django, PostgreSQL, Redis, Docker, Google Cloud Platform, Google OR-Tools, GitLab, Jira

Skills

* Enterprise Development: Django 5.0.6, Multi-tenant SaaS, PostgreSQL 17, Redis clustering, Docker, Google Cloud Platform
* Mathematical Optimisation: Google OR-Tools, Constraint programming, Critical path method, Statistical analysis
* Security & Authentication: Multi-tenant data isolation, Auth0 integration, Database encryption (pgcrypto), Audit trail systems, Network security, Cybersecurity
* Programming Languages: Python, JavaScript, Java, SQL, R, HTML5, CSS3
* Frontend Development: React (hooks, Context API), Bootstrap 5, Webpack 5, Chart.js, Responsive design
* Database Systems: PostgreSQL (hstore, pgcrypto, pg\_trgm), MongoDB, MySQL, Database optimisation
* AI/ML: PyTorch, TensorFlow, CNN architectures, Computer vision, Medical imaging
* DevOps & Tools: GitLab, Jira, Sentry, Auth0, AWS, Docker containerisation, Git/GitHub
* Programming Languages: Python, Java, JavaScript, SQL, R, HTML,
* Frameworks: Django, Flask, React
* Databases: PostgreSQL, MongoDB, MySQL, Redis
* Tools: Docker, Git, GitLab, Jira, VS Code, Chrome DevTools
* Libraries: PyTorch, TensorFlow, PyMongo, Flask-CORS
* API’s: REST APIs, HERE Maps, Auth0 API, Google APIs

Education

MSc : Computer Science, 09/2024 - 09/2025

Newcastle University

Key Technologies and Skills: Java, Python, PyTorch, TensorFlow, HTML, Computer Networks (TCP & UDP)

Cybersecurity Tools: Wireshark, nmap, PCAP analysis, MITM attacks.

Specialisations: Medical AI, deep learning, statistical validation

* Advanced Programming (84%), Software Engineering (84%), Database Systems (83%), Computer Networks (82%), Cybersecurity (77%)
* Dissertation: Comparison of Novel vs standard CNN architectures for automated skin cancer detection
* Developed an FDA-compliant evaluation framework comparing state-of-the-art deep learning architectures (ResNet, VGG, EfficientNet) for automated dermatological diagnosis. Conducted systematic performance analysis on clinical validation datasets, focusing on diagnostic accuracy and patient safety protocols.

BSc (Hons) : Biology (2:1) , 09/2021 - 05/2024

Newcastle University

Key Technologies: R, AlphaFold, BLAST, Bioinformatics platforms,

* Research Dissertation: "A Systematic Review of CRISPR Gene Editing in Enhancing Fusarium Head Blight Resistance in Wheat and Barley" (83%)
* Dissertation Research Focus: Comparative analysis of CRISPR techniques (BSMV-mediated CRISPR, SpCas9 delivery), systematic literature review methodology
* Bioinformatics, microbial genomics, statistical analysis

A Levels: Biology, Chemistry, Mathematics, 08/2018

St Albans Boys School

* Grades: B, B, C

GCSEs, 05/2018 - 08/2018

St Albans Boy School - St Albans

* A\*-6

Projects

**Cryptocurrency Exchange Platform***Django, PostgreSQL, REST APIs, Order Matching*

* Built a custom order matching engine with a price-time priority algorithm
* Designed database schema with relationships between orders, trades, and wallets
* Implemented REST API endpoints for mobile integration
* Developed edge case handling for partial fills and identical price orders
* Built service-oriented architecture following Django best practices
* Currently processing test orders with stable performance

GitHub: github.com/JemAndrew/crypto-exchange

**Holiday Cluedo Progressive Web Application**

*JavaScript, HTML5, CSS3*

* Built browser-based multiplayer game supporting 20+ concurrent users
* Implemented Fisher-Yates shuffle algorithm with collision detection
* Developed offline-first architecture using service workers and local storage
* Deployed production-ready application via GitHub Pages

GitHub: github.com/JemAndrew/holiday-cluedo

Live Demo: https://familycluedo.netlify.app/

**Django CV Portfolio**

**Bike Route Planning Application**

*Python, Flask, React, MongoDB*

* Collaborated in a 5-person team to build a full-stack cycling route application (85% grade)
* Developed REST API endpoints for user authentication and route management
* Integrated HERE Maps API after migrating from the deprecated Google Places API
* Implemented React frontend with Flask backend and MongoDB database
* Applied agile methodology with Git version control and sprint planning

GitHub: github.com/JemAndrew/bike-route-planning

*Django, Python, HTML*

* Built a full-stack Django application with a responsive design and modern UI/UX
* Implemented dark/light theme toggle with smooth animations using the AOS library
* Developed interactive skill charts using Chart.js and typing animations
* Created RESTful API endpoints for skills and projects data
* Integrated contact form with AJAX submission and Django admin interface
* Deployed with responsive CSS Grid/Flexbox layouts and SEO optimisation

GitHub: github.com/JemAndrew/cv-website

Hobbies & Interests

I play football weekly and stay active with weight training/callisthenics and running. Intellectually, I am very enthusiastic about chess and love reading science books (recently read Einstein's theory of general relativity). I have a weird talent for geography, which is naming most countries' capital cities, flags, and locating them easily on a map, which makes me popular at pub quizzes. Socially, I am a Football season ticket holder who enjoys attending home games and gigs by my favourite rock bands.