Daniel Favour Oshidero

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Technical Skills

Languages: Python, SQL, JavaScript (ES6+), Java, VBA
Data & ML: scikit-learn, PyTorch, spaCy, NLTK, Hugging Face, Neo4j, PowerBI
Cloud & DevOps: AWS, Terraform, Docker, Jenkins, GitHub Actions, Linux (Ubuntu, Amazon Linux)
Web Frameworks: React, React-Native, Angular, Node.js, Flask, HTML/CSS
Additional Competencies: Adobe (Photoshop, Illustrator, Indesign), Autodesk (AutoCAD, Revit, 3DS Max), Unreal Engine
Certifications: AWS Cloud Practitioner, Neo4j Certified Professional, The Complete 2023 Web Developer Bootcamp

Research & Publications

Oshidero, D. F. O. & Coley, D. A. (2026). Talking Carbon: A Lexical Approach to Predictive Carbon Analysis via Machine Learning. *International Journal of Architectural Engineering and Design Management*, pp. 1–34.

- Introduced a novel ML methodology combining NLP and Histogram-based Gradient Boosting for predicting embodied carbon from conversational design language, validated through real-world case studies and user evaluation.

Relevant Experience

Software Engineer (Data Systems & Infrastructure) — **(Remote) Manchester, UK**
***Robert Bosch GmbH** & **ETAS Ltd.** — *Embedded Systems for Automotive Industry* — *Sep. 2024 – Present*

- Cut analytics platform cost by ∼88% (**from $5.5k to $675/month**) by replacing managed AWS OpenSearch/OSIS with a self-managed EC2 OpenSearch cluster using Python-based ingesters and parsers, maintaining scalability and functionality.
- Designed pattern mining algorithms for sequence-based machine learning models to analyse temporal diagnostic logs and predict next-likely vehicle faults, with approximately **60% accuracy**.
- Architected a production-ready NLP interface for Neo4j using transformer intent models and LoRA fine-tuning, enabling non-technical users to query graph database with **above 90% success**.
- Automated a Java-based logging pipeline to extract system metrics from internal automotive tool and generate HTML diagnostics reports for **25+ stakeholders**, enabling continuous system health monitoring.
- Managed Linux-based servers (Amazon Linux, Ubuntu) via Jenkins/Terraform workflows and Python/cron-based automation for provisioning, backups, and system maintenance across production and staging environments.
- Re-architected legacy ingestion into a scalable Python XML-to-JSON AWS Lambda pipeline processing **130M+ records/day**, reducing data pipeline latency by 70%.

Data Engineer & Analyst (BI Infrastructure) — **Wolverhampton, UK**
***KTC Edibles Ltd.** — *Supplier & Manufacturer for Food & Oil* — *Jun. 2023 – Sep. 2023*

- Engineered an automated SQL-based data infrastructure by replacing manual CSV workflows with ETL pipelines, CRM ingestion scripts, SQL Agent scheduling, and data validation processes — eliminating **16+ hours** of weekly manual work and enabling **real-time reporting for 80+ employees**.
- Enhanced BI capabilities by implementing RLS-secured dashboards, VBA-based data entry tools with audit trails, and improved data models — driving a **93% improvement** in user satisfaction and reporting efficiency.

Education

Academic Qualifications

Master of Science, Applied Data Science — **University of Buckingham** — *In Progress.*
Master of Science, Computer Science — **University of Bath** — *Graduated with Distinction*

Awarded the Global Leaders Scholarship for academic excellence and outstanding leadership.

Honours Bachelor of Science — University of Bath — *Graduated with 2:1*

Appointed Senior Student Ambassador for supporting student outreach and learning initiatives.
Appointed President of the Afro-Caribbean Society, leading cultural awareness and community inclusivity initiatives.

Professional Qualifications

Level 7 Certificate, Digital and Technology Solutions Specialist — *In Progress.*
Level 3 Diploma, Networking and Cybersecurity — *Awarded by Gateway Qualifications*

Projects

Deep RL Models for Increasingly Complex Game Environments: Doom & CartPole | *Python, Pytorch*

- Developed and implemented multiple deep reinforcement learning algorithms (**DDDQN, DRQN, PPO, REINFORCE**) to train agents on both simple (CartPole) and complex (VizDoom "Defend the Center") environments.
- Designed agents capable of learning navigation, resource management, and survival strategies through visual input and environment feedback.
- Evaluated and compared performance across environments, highlighting the effectiveness of advanced models in high-dimensional state/action spaces.

Bloom: Gamified Plant Learning Application | *JavaScript, React, React-Native*

- Led the design and delivery of **Bloom**, a cross-platform mobile app that gamifies plant care education through interactive learning and habit-forming mechanics.
- Deployed to **12+ physical iOS/Android devices** via Expo for real-world testing, enabling iterative UX improvements and device-specific optimisations.
- Improved user experience through weekly feedback loops, resulting in an **80% increase in satisfaction scores** and measurable gains in user engagement.

Simulation of Relational Database Systems using CRUD Operations | *Python (Tkinter, SQLite3), SQL*

- Developed a simulated Airline Database Management System, integrating a Python Tkinter GUI with a relational SQLite3 backend.
- Implemented functionalities to add, edit, and delete records across multiple tables (flights, employees, airports), with real-time updates and validation in database.