Abdullah James

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Education

University of Manchester, BSc Computer Science with Industrial Experience.   September 2023 – present
- Degree Classification (1st year): 1st.
- Relevant modules: Software Engineering, Knowledge Based AI, Algorithms and Data Structures.

Experience

Software Engineer, HippoNotes (startup).   January 2024 – present
- Developed responsive and intuitive frontend features aligned with user needs and business requirements.
- Participated in regular Agile meetings, managed tasks using Kanban boards, and ensured efficient feature delivery.
- Utilised Git for version control, enabling streamlined team collaboration and continuous integration.

Private Computer Science Tutor, Self-employed (paid).   January 2024 – June 2025
- Prepared material in line with the client's curriculum and strengthened knowledge on key subjects.
- Identified areas of weakness in the client's ability and suggested ways of improvement.
- Furthered the understanding of the client through active discussion and the exploration of ideas.

Secretary, ACS – University of Manchester (voluntary).   September 2024 – June 2025
- Relayed important information across the departments and updated the calendar accordingly.
- Monitored deadlines and organised meetings to notify and discuss with the relevant members.
- Collated and compiled feedback after events and processes and suggested future improvements.

Projects

Client-Focused Appointment Booking System with Admin Controls, (paid).   August 2024 - present
- Built a full-stack React/Vite & Node.js/Express (TypeScript) app with JWT auth, email verification, bcrypt hashing, and role-based customer/admin access.
- Created an interactive calendar with real-time slot browsing, 30-minute holds, and cron-driven cleanup to prevent double-bookings.
- Integrated Stripe & Revolut Pay checkout and webhooks, automated confirmation emails via Nodemailer, and branded PDF receipts.
- Developed a responsive Tailwind CSS/Radix UI and admin dashboard for slot/customer management, analytics, security hardening, and Jest/Supertest tests.

Neural Network Trading Algorithm with Q-Learning Optimisation, (exploratory).   July 2024
- Developed a neural network model trained on two years of minute-level financial data to predict short-term price movements based on 30-minute historical inputs using Python.
- Engineered a sophisticated trading algorithm incorporating neural network predictions, technical indicators (RSI, ADX), and moving averages to generate buy/sell signals.
- Implemented a Q-learning agent using the QuantConnect API to optimise indicator parameters, maximising a weighted sum of backtest performance metrics across multiple trading pairs.

Educational Software for Pathfinding and Optimisation Algorithms, (cwk).   June 2023
- Discussed with A-level computer science teachers about the functionality of a software that would be optimal in enabling students to learn graph theory more effectively.
- Developed an interactive graph theory visualisation tool allowing users to create, manipulate, and analyse custom graphs with movable nodes and adjustable connections using Visual Basic.
- Implemented and visually demonstrated multiple pathfinding algorithms (BFS, DFS, Dijkstra's) and optimisation techniques (brute force, nearest neighbour) for solving the Travelling Salesman Problem.

Additional Experience

JPMorgan Software Engineering Job Simulation on Forage (July 2024).

BCG Data Science Job Simulation on Forage (August 2024).