Daniel Rodrigues

rcdan22@gmail.com ❖ Personal Website ❖ +44 0 749 077 0351 ❖ London, United Kingdom

WORK EXPERIENCE

Full Stack Software Engineer
July 2024 – Present
Nomura International plc — London, United Kingdom

- Leading a cross-functional team of grads to prototype an internal application for bankers that leverages **LLMs** and **agentic workflows** to generate financial reports with **adversarial hallucination checking**.
- Co-engineered the **technical design** and implementation of a **supervised learning** and **sentiment analysis** challenge for a hackathon for 6th-form students being held by SEO London and my company.
- Increased the speed of message and event passing within my team's microservices by 70% by developing a message broker microservice in Java SpringBoot in conjunction with a Solace event bus.
- The service receives and delivers updates via **websocket connections** with **read/write buffer queues**, along with **dynamic multithreading** based on real-time server resources.

Full Stack Software Engineer Intern
June 2022 – June 2023
Nomura International plc — London, United Kingdom

- Led the development of a React.js **Micro-frontend** architecture for a new UI project.
- Decreased team's React development time by 50% by creating an optimized React component library.
- Developed an **end-to-end fullstack login service** using Spring Security, LDAP authentication, and React.
- **Mentored** two inexperienced team members in JavaScript and React by hosting peer-programming sessions, reviewing their code and often suggesting optimisations.
- **Automated** the deployment of multiple projects by implementing a **Jenkins CI/CD pipeline** with **Docker**.

Data Science Intern
June 2021 – July 2021
ICIS (LexisNexis Risk Solutions Group) — London, United Kingdom

- Worked on a Python web analytics project, involving 90 million rows of user-generated data.
- Carried out data preprocessing and modelling, and prepared visualisations as graphs and dashboards.

EDUCATION

BSc (Hons) Computer Science | *First Class Honours*
Sep. 2020 – June 2024
Brunel University — London, United Kingdom

- Graduated at the **top of my class**, attaining a 98% overall GPA.
- Thesis on character consistency research in generative Diffusion models using LoRAs and ControlNet.
- **Relevant modules:** Algorithms and their Applications (A*); Artificial Intelligence (A*); Networks and Operating Systems (A*); Software Engineering (A*), Logic and Computation (A*).

PERSONAL PROJECTS

PC Planner Agent | *LangGraph, Gemini API, ChromaDB, Python, LLMs, RAG*
- LLM-based LangGraph agent workflow with tools and RAG to help users build their own PCs.

CodeWalker | *React, SpringBoot, JavaScript, Java, Maven*
- Fullstack webapp to write and evaluate code to help classmates pass their coding assignments.

KEY SKILLS

- **Languages / Scripting:** Java, Python, JavaScript, C++, HTML / CSS, Linux Bash / Shell
- **Libraries / Frameworks:** Java Spring, React.js, Express.js, Sklearn, Pandas, NumPy, LangChain, LangGraph
- **Software / Tools:** MySQL, Git, CI/CD (Jenkins, Kubernetes, GitLab CI), Containerization (Docker, Podman), Microservices, REST APIs, Frontend, Jupyter Notebook, Google Colab, Helm Charts, LLMs, Generative AI

HOBBIES AND INTERESTS

Science-fiction novels; Digital illustration; Creative writing; AI & physics research; Space; Futurism.