J. Diogo Fernandes C.

Senior Software Engineer

(+44) 7805839949 | diogofernandescon@gmail.com | diogo.space | diogofernandesc | diogofernandesc

Experience

NOVA Wealth

London, UK

Senior Software Engineer — *Sep 2025 - Present*

- Tech lead on an end-to-end mortgage product, replacing a manual third-party process and transforming operations:
  - Led a team of 3 engineers and managed the project end to end, from design through to delivery and adoption.
  - Cut out heavy manual data input by operations, saving ops *hours* per mortgage application.
  - Revamped the client-facing frontend and internal data processing, migrating the core data models that drive the business onto future-proofed foundations that scale to new use cases like corporate clients and trusts.
  - Managed the shift in ways of working for operations and financial planners, limiting impact and risk to them without introducing the potential for unsafe financial advice.
- Led the team's transformation to AI-first, agentic programming with Claude Code:
  - Established the patterns and ways of working for building software in an AI-first world, always researching new ones.
  - Addressed security, set up guardrails and infrastructure to manage safe use of agentic tooling across the team.
  - Keep on top of the latest AI developments to improve team workflows: reliable feedback loops, automated ticket triaging, and CLI infrastructure plugging workflow gaps so we move from clicking around to letting AI take over.
  - Now experimenting with evals and cloud infrastructure for always-on agent use cases.
- DevOps overhaul that let the team ship significantly faster and with far more confidence as it scales:
  - Deep integrations between our internal APIs and databases, Salesforce and GitHub Actions to provision full sandbox environments automatically.
  - Reliable, production-like obfuscated data in every sandbox, so engineers and AI agents build against realistic data instead of shooting in the dark.
  - Contained environments give agents reliable feedback loops without putting production at risk.

Career Break

Travelling — *Nov 2024 - Sep 2025*

- Took time out to travel: motorbike road trips through Japan and Thailand, and fell in love with diving along the way.

NOVA Wealth (Previously Octopus Wealth)

London, UK

Software Engineer — *Jul 2021 - Oct 2024*

- Co-architected and co-led an asset ledger system now managing close to £1B of AUM, automating the manual leg work of financial advice: saving *days* of data entry per client onboarding and up to *8 hours* of planner validation per case, with FCA compliant auditing.
- Designed and built a deep bidirectional integration between Salesforce and internal API services (gRPC on the Salesforce event bus, Celery async workflows, state consistency with Postgres).
- Technical lead for a migration to AWS Cognito / OpenID Connect authentication for internal (Salesforce federated) and client logins; SMS MFA cut customer login support queries by over 90%.
- Rebuilt CI/CD from a single "push to master" environment into multi-env Docker pipelines on Heroku and GitHub Actions, with self-serve dev environments mirroring Salesforce sandboxes.
- Built a near real-time caching layer for the customer portal, cutting page load times by 50% on average.

Octopus Investments - Labs

London, UK

Software Engineer — *Dec 2019 - Jul 2021*

- Migrated Octopus Investments client SSO to OpenID Connect with IdentityServer4.
- Built an "aggregator" microservice to serve legacy cross-system investment portfolios for +10,000 clients in milliseconds.
- Migrated infrastructure & DevOps from GCP to Azure with fully distributed log tracing:
  - Built infrastructure-as-code, automated, containerised CI, and zero downtime CD pipelines.
  - Stack included Azure App Service, Azure Container Registry & App Insights with Opencensus.

Teradata *London, UK/Madrid, Spain*

Data Engineer *Sept 2018 - Nov 2019*

- Improved and maintained Kafka & Solr based, automated document processing system for a leading Spanish bank processing more than 10,000 documents per hour. Maintained Java and Python based data processing microservices.

Education

University of Southampton *Southampton, UK*

BSc in Computer Science - First Class Honours *Sept. 2015 - June 2018*

- **Dissertation research project:**
  - Automating the fact-checking of interesting, relevant statements made by MPs on Twitter with SVM classifiers through automated NLP feature extraction and automated crowdsourcing.

Skills

Programming

- **Languages:** Python, Java, Javascript
- **Frameworks:** Flask, Django, FastAPI, Spring Boot, React
- **AI:** Claude Code, Codex, Cursor
  - Frontier agent SDKs, PydanticAI
  - MCP, hooks, subagents, skills
  - Evals, context engineering

Languages

- English - Bilingual proficiency
- Portuguese - Native proficiency
- Spanish - Professional working proficiency

Infrastructure

- **Databases:** Postgres, Redis, DynamoDB, S3, MongoDB
- **DevOps:** AWS, Heroku, Github Actions, Docker
- Celery, RabbitMQ, gRPC, Elasticsearch, familiar with Kafka
- Salesforce (integration & config)

Professional

- Report writing & LaTeX
- Presentation skills

Interests

Travel

- I'm a big believer in living life to the fullest and experiencing new things
- During my career break I found my happiest moments road tripping through Japan and Thailand on a motorbike

Ocean life & Diving

- Something I fell in love with during my career break
- I've been lucky to have seen some majestic creatures but still in search of seeing a whale shark

Simracing

- I enjoy casual sessions of iRacing, the top simracing simulator in the world where real world drivers like Max Verstappen drive, both competitively and for fun
- I also like to join in on iRacing special events, typically endurance events mimicking the real world calendar like Spa 24h or Le Mans 24h

Snowboarding

- Something I've only recently picked up, loved and (slowly) getting better at