

Filipe Miguel Nelas da Cruz

Backend Engineer, Go & Distributed Systems

Porto, Portugal · EU citizen, no visa sponsorship needed · Open to relocation to the Netherlands

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Summary

Backend engineer with 6 years building distributed systems, 4+ of them in Go. Designs and runs event-driven microservices on Kafka, PostgreSQL and Kubernetes across AWS and GCP. Currently develops Shell's EV-charging platform (live across Europe, North America and Asia), focusing on interoperability with charge point operators over OCPI and OICP. Background in near real-time data pipelines, zero-downtime migrations and domain-driven design, plus experience mentoring junior engineers and teaching distributed systems at university level.

Experience

Software Developer, DEUS.AI (contractor for Shell)

Sep 2025 – Present · Porto, Portugal

- Build and maintain Go microservices for a vMSP (virtual Mobility Service Provider) EV-charging platform, running in three separate production regions: Europe, North America and Asia (Malaysia, Indonesia)
 - Develop the platform's OCPI and OICP protocol layer on the Integrations team, handling how individual charge point operators interpret the standards and supporting vendor-specific extensions (e.g. Tesla's custom fields)
 - Develop region-specific partner features on a shared core (~90% of the platform common to all regions), including custom CPO features such as subscriptions with discounts or credits, and OEM integrations that let partners manage their own customers on the platform
 - Work within a multi-region architecture with full data separation: dedicated Kubernetes clusters and PostgreSQL instances per region

- Expose service data through a federated GraphQL API that merges each microservice's schema into one endpoint, serving the internal portal and the customer and OEM apps
- Stack: Go, Kafka, PostgreSQL, Kubernetes, AWS, gRPC/Protobuf, GraphQL, Dynatrace, Grafana
- Mentor a junior engineer from another team through DEUS.AI's mentorship program: guide their learning path, run regular 1:1s, check in on engagement, and gather peer feedback for their performance review

Software Developer, BJSS

Mar 2023 – Sep 2025 · Porto, Portugal

- Built and maintained back-office systems for bet365
 - Designed and built a generic near real-time data platform, used for fraud detection, marketing campaigns, data replication and analytics
 - Designed and delivered a change-management system and migrated data and users from the legacy systems with zero downtime using the strangler fig pattern, improving user productivity and data quality
 - Designed and built a generic end-to-end testing framework (godog, BDD/Gherkin) with reusable steps for sending and validating HTTP requests, publishing and asserting Kafka messages, and a mock HTTP server that captures and verifies requests, so QA engineers could write test scenarios without writing code
 - Mentored two junior QA engineers new to Go and Kafka, getting them up to speed on the project's domain and tooling
 - Stack: Go, C#, Kafka, PostgreSQL, Kubernetes, React, Google Cloud Platform
- Built tooling (Go, Python, C#) and led the migration of 1,000 users and 6,000 repositories from self-hosted GitLab to GitHub Cloud

Guest Assistant Professor (part-time), ISEP

Sep 2023 – Feb 2025 · Porto, Portugal

- Taught practical classes in Distributed Systems (microservices, Kafka/RabbitMQ, CQRS, sagas) and Programming Paradigms (Java, object-oriented programming); assessed student projects and prepared and graded final exams

Software Developer, Sharespot / Sensae

Mar 2021 – Nov 2022 · Mangualde, Portugal

- Designed, built and deployed Sensae Console, an IoT platform with a microservices and micro-frontends architecture
 - Implemented the data pipeline features: categorization, transformation, filtering, retention, hierarchical ownership and metadata enrichment of sensor data
 - Built a rule-based alerting engine (Drools) that generated alerts from sensor data
 - Built a notification service that acted on alerts and sent emails, SMS and web notifications
 - Built a digital-twin service that acted on alerts and triggered device actions
 - Shipped domain apps (smart irrigation, fleet management) and an SDK for building apps on the platform
 - Stack: Java, Spring, Quarkus, PostgreSQL, QuestDB, RabbitMQ, Docker, Angular, TypeScript
- Built a customer portal in Go (PostgreSQL, domain-driven design) for onboarding hotspot-hosting clients: registration, hotspot counts/details and crypto wallet balances, aggregated from external services. Included a withdrawal-request flow with email notifications that fed the payout process

University Assistant Trainee, ISEP

Feb 2020 – Oct 2020 · Porto, Portugal

- Built a platform for managing ISEP's project and internship course units, with a configuration component defining who could interact with each unit, when, and with what data (Java/Spring, Angular/TypeScript, PostgreSQL/MySQL, RabbitMQ, Docker)

Skills

- **Languages:** Go, Java, C#, Python, TypeScript, SQL
- **Architecture:** event-driven microservices, domain-driven design, CQRS, sagas, strangler fig migrations, REST, gRPC/Protobuf, GraphQL
- **Messaging & data:** Kafka, RabbitMQ, PostgreSQL, MongoDB, QuestDB
- **Cloud & ops:** AWS, Google Cloud Platform, Kubernetes, Docker, Prometheus, Grafana, Dynatrace, Linux, Git
- **Frameworks:** Spring, Quarkus, Angular, React

- **Testing:** unit, integration and end-to-end testing, BDD (godog/Gherkin)
- **Domain:** EV charging (OCPI, OICP), IoT
- **Ways of working:** Agile (Scrum), code review, mentoring

Education

- **MSc Computer Engineering**, Instituto Superior de Engenharia do Porto (ISEP), 2020 – 2022 · Grade 16/20 · Thesis: Sensae Console, an enabler platform for IoT-based services
- **BSc Computer Engineering**, Instituto Superior de Engenharia do Porto (ISEP), 2017 – 2020 · Grade 16/20 · Thesis: Configurable information management system for internship curricular units

Languages

Portuguese (native) · English (C1, professional working proficiency)