


Francisco Filipe

SENIOR BACKEND ENGINEER | DISTRIBUTED SYSTEMS & DATA PLATFORMS (PYTHON)

Caldas da Rainha, Portugal | +351 915 306 803 | francgf@gmail.com

 [linkedin.com/in/francisco-filipe/](https://www.linkedin.com/in/francisco-filipe/)

 [xhico.github.io](https://github.com/xhico)

 Portuguese Native, English Proficient (C2)

Professional summary

Backend Engineer specialising in high-scale data systems and distributed architectures, with 10+ years of programming experience and 5+ years building production-grade backend platforms professionally.

Strong background in Python, distributed task processing, and large-scale data infrastructure, with proven experience scaling crawling and data processing systems from 100K to 100M+ requests. Experienced in designing resilient pipelines, REST APIs, and backend services using Celery, Redis, PostgreSQL, Elasticsearch, Docker, and Linux-based infrastructure.

Comfortable owning systems end-to-end, from architecture and implementation to deployment, monitoring, and production troubleshooting, with a strong focus on scalability, reliability, and engineering efficiency.

Experience

Backend Engineer (Python, Distributed Systems) | Little Forest (Remote, UK)

Feb 2021 - Present

- Led the re-architecture of a legacy Java-based crawling platform into a Python-based, Dockerized distributed system, improving scalability, maintainability, and deployment consistency
- Scaled the crawling infrastructure from ~100K page crawls to 100M+ requests, enabling large-scale data collection and processing
- Built high-performance data pipelines processing millions of web records daily
- Extended the platform to support PDF ingestion and processing, enabling automated extraction of structured data from document-based sources
- Built and optimized RESTful APIs to support internal services and third-party integrations, improving system reliability and interoperability
- Implemented distributed task processing using Celery and Redis, increasing system throughput, fault tolerance, and background job efficiency
- Containerized core services using Docker, enabling reproducible environments and streamlined deployment workflows
- Designed, optimized, and maintained PostgreSQL/ElasticSearch databases, improving query performance and ensuring data integrity at scale
- Managed Linux-based infrastructure, ensuring high availability, security, and performance of production systems
- Automated data and operational workflows, reducing manual intervention and improving overall engineering efficiency
- Conducted code reviews and collaborated with cross-functional teams to maintain high engineering standards
- Diagnosed and resolved complex system issues, improving platform stability and performance

External Vice President | UTAD Solutions Consulting | Vila Real, Portugal

Feb 2018 – Jul 2020

- Led external partnerships and cross-team coordination within a university consulting organisation during BSc studies

IT Systems Administrator | J.A.J. - Informática Lda | Caldas da Rainha, Portugal

Jan 2015 – Dec 2017

- Automated backup processes using PowerShell, improving system reliability and reducing manual workload
- Managed and maintained Windows Server environments, ensuring system uptime, security, and performance
- Deployed and configured Microsoft Exchange, supporting email infrastructure and user management

Skills & abilities

Core Backend & Data Skills

- Python development (primary programming language)
- Celery for distributed task processing and background job automation
- Redis for caching, message brokering, and performance optimization
- PostgreSQL/ElasticSearch database design, querying, and optimization

Backend Development

- JavaScript and Node.js development
- RESTful API design and third-party API integration
- Database querying and data manipulation
- Full-stack project development and management

Tools & DevOps Practices

- Git and GitHub version control workflows
- Unix/Linux shell scripting for automation and system tasks

AI-Assisted Development & Productivity

- Advanced use of AI-assisted development tools (Claude Code) for design, implementation, and code review

Education

University of Trás-os-Montes and Alto Douro, MSc Computer Engineering

Sep 2020 – Jul 2022

- Thesis: Development and maintenance of digital platforms, both front-end and back-end, at Little Forest UK
- Publications: Why Web Accessibility Is Important for Your Institution. ScienceDirect, March 22, 2023.

University of Trás-os-Montes and Alto Douro, BS Information Technology

Sep 2017 – Jul 2020

Faculty of Sciences of the University of Lisbon, BS Information Technology

Sep 2016 – Jul 2017