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agrubio

> Senior Python developer and Physicist

## **PROFESSIONAL SUMMARY**

• Experienced and versatile backend developer with over 8 years of expertise in designing and deploying scalable microservices and high-performance data systems using Python, FastAPI, and Docker.

agrubio.dev

- Strong background in physics and mathematics, combined with hands-on experience in cloud infrastructure, CI/CD automation, and real-time data processing.
- · Proven ability to lead development teams, drive architectural decisions, and deliver production-ready software solutions — with a growing focus on security, including hands-on exploration of vulnerable applications like OWASP JuiceShop

## **TECHNICAL SKILLS**

- Backend: Python (Django, FastAPI), Cython, C++, C#, Matlab, R
- Database: PostgreSQL, MySQL, MongoDB, **ElasticSearch**
- Cloud: Private Cloud (self-managed), AWS (EC2, S3, Lambda)

# **PROFESSIONAL EXPERIENCE**

> Santander Bank S.A. / NovaQuality Inns-

bruck, Austria

Senior Python developer 02/2024 - Present

- Refactored and optimized core banking services in production, leveraging SonarQube to detect code smells, enforce quality gates, and enhance long-term maintainability.
- Integrated microservices architecture with Python and FastAPI, streamlining backend processes, reducing API response time through SOLID principles while securing authentication with Keycloak.

### > Brainy

Zaragoza, Spain 04/2023 - 02/2024

Zaragoza, Spain

- Used SonarOube to ensure code quality and guide the development of a scalable microservices architecture.
- Automated CI/CD pipelines using GitLab, reducing deployment time by 50% and increasing release frequency.
- · Integrated Keycloak as an identity provider across microservices, implementing OAuth2/OIDC flows and securing API communication against common authentication vulnerabilities.

### > Aragon Photonics Labs

Senior Backend developer

Lead R and D Engineer / CTO 09/2021 - 04/2023

- Led a 5-person technical team, managing AI-driven research projects in collaboration with universities.
- Optimized real-time signal processing algorithms, increasing data analysis speed by 85% in photonic devices.
- · Developed and maintained a Dockerized microservices architecture, improving software scalability and deployment efficiency.
- · Managed GitLab CI/CD workflows, reducing software release cycles from 3 weeks to 1 week.

- Frontend: TypeScript, Angular, React, Javascript, Node, HTML, SCSS
- Infrastructure: Docker, Kubernetes, RabbitMQ, Kafka, keycloak, Fortify
- Methodologies: SOLID, TDD, CI/CD
- Tools: Git, GitHub/GitLab, SonarQube, Fortify

#### **R** and **D** Engineer

Project Engineer

- 10/2020 09/2021 • Designed and implemented high-performance data processing pipelines, reducing computational time
- for seismic and audio data analysis by 40%. · Applied SOLID and TDD principles to refactor legacy code, improving maintainability and test coverage.
- Processed terabytes of real-time data, enabling advanced analytics in photonic measurement systems.

02/2019 - 10/2020

### > Efor, Internet and technology

	Zaragoza, Spain
Data analyst	04/2017 - 11/2017
> Kampal Data Solutions, BIFI, L.S.	
	Zaragoza, Spain.

▶ Internship

05/2016 - 06/2016

# **EDUCATION**

> Master in physics of complex systems UNED 2020 - 2021, Zaragoza, Spain.

> Master degree in mathematical modelling, statistic and computing UNIZAR & UPV/EHU 2016 - 2018, Zaragoza, Spain.

> Degree in physics UNIZAR 2011 - 2016, Zaragoza, Spain.