

Antonio Martínez Fernández

Full-Stack Developer | Software Engineer

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PROFESSIONAL EXPERIENCE

Full-Stack Developer (Python & Angular & FastAPI)

Bionet - November 2023 - Present

Participate in all stages of software development for ROSITA2, an **embedded system for bioreactors**, developing both frontend and backend solutions while ensuring seamless integration with hardware.

- Development of **Rest APIs and microservices** using Python and FastAPI. Usage of Redis queues and events for fast and efficient microservices communication.
- Design and development of a touchscreen and desktop **application interface for real-time managment** of bioreactors with **Angular**, Bootstrap and Neutralino.
- **Software lead** for bSmart devices such as CT1 and bBreath4 obtaining **integrated backend-frontend solutions** and working closely with electronics teams for integrating low level hardware software. Led meetings for retrospective analysis and future planning based on requirements and user feedback.
- Contribute to **architecture planning** and decision-making for **system design**.
- Worked extensively with technologies such as **OPC UA** and **Asyncio**.
- **Unit and integration tests** with pytest as well as extensive testing with physical prototypes to ensure reliability and performance.

Lead Developer and Owner

Spotify Electron - May 2023 - Present

As the owner and Lead Developer of an **open-source cross-platform music streaming application**, I have been at the forefront of replicating and enhancing Spotify's functionalities while incorporating unique user-requested features such as the ability to upload personal music. My role encompasses leadership, development and automatization.

- Development of **Rest APIs** using Python, FastAPI and MongoDB with JWT authentication .
- Implement an efficient **music streaming architecture**.
- Utilize **AWS** (S3, CloudFront, Lambda) for storage, content delivery, and serverless functions.
- Develop a **cross-platform desktop app** using React, TypeScript, and Electron.
- **Design UI** with Material-UI, Bootstrap, HTML, and CSS, inspired by Spotify's UI.
- **Lead a global open-source team** of 25+ contributors using Agile methodologies.
- Manage **Git/GitHub**, overseeing branches, PRs, and issue tracking.
- Use **Docker** for streamlined development and production environments.
- Automate **CI/CD pipelines** with GitHub Actions, ensuring code quality and testing.
- Implement **end-to-end and unit testing** with React Testing Library, Jest, and pytest.

EDUCATION

Bachelor Degree's on Computer Science

Software Engineering Specialization
(2019-2023) **7.5/10 (3.3 GPA)**

MongoDB Python Developer Path

EF SET English Certificate 88/100 (C2 Proficient)

SKILLS

- | | | | | |
|-----------|------------------|-----------------|-------------|-------------------------|
| • Python | • Typescript | • React | • Angular | • Java |
| • FastAPI | • MongoDB | • Microservices | • Rest APIs | • Docker |
| • Linux | • Github Actions | • PostgreSQL | • Electron | • Software Architecture |

LANGUAGES

- **English:** Professional Working Proficiency (C1)
- **Spanish:** Native/Bilingual