Pablo **González**

COMPUTER ENGINEER · PYTHON ENGINEER

Salamanca, Castilla y León, Spain

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Summary

Hey there! I'm Pablo González, a Computer Engineer passionate about backend development in Python. As a developer, I specialize in OOP with Python, system architecture, developing API-First systems, and leading backend projects from start to finish. My experience includes the design, implementation and deployment of web applications and microservices, database management, and server administration. I am committed to improving code quality, efficiency and maintainability.

Education

USAL(University of Salamanca)   *Salamanca, Spain*

B.S. IN COMPUTER ENGINEERING   *Sep. 2018 - Jul. 2022*

- Got a 10 with Honours in the Final Degree Project: Prometheus-like system for monitoring and command execution on multiple devices from different networks.

Work Experience

Axpe Consulting S.L.

PYTHON ENGINEER - SANTANDER BANK   *Nov. 2023 - Present*

PYTHON ENGINEER - QUANT AI LAB   *Dec. 2022 - Nov. 2023*

- Led comprehensive development and overhaul of international-scale AI projects, employing Python for backend microservices.
- Integrated FastAPI with internal AI libraries for user-friendly functionality and seamless interaction; implemented security measures such as OAuth and integrated MongoDB with a generic CRUD manager.
- Revamped existing AI application, utilizing FastAPI and MongoDB for backend and React with NextJS for frontend; significantly improved workflow, streamlined hiring process, and enhanced efficiency for numerous employees.
- Executed successful data transformation initiatives, migrating data from legacy Access - SQL Server to MongoDB; crucial step in modernizing data infrastructure and ensuring compatibility with evolving technological needs.

PYTHON ENGINEER - INTERNAL DEVELOPMENT   *Dec. 2022 - Present*

- Spearheaded the API-First development of a three-microservice ecosystem on AWS, shaping our workstation reservation system. Collaborating seamlessly with the API design team, I established a secure and scalable architecture using FastAPI, Pydantic, and PostgreSQL. Our deployment process was optimized with advanced Dockerfiles and Docker-Compose, ensuring efficiency and reliability. Prioritizing effective communication between microservices, I integrated HTTPX and strengthened system security through the thoughtful use of environment variables and user privileges.
- Honed and implemented a Python archetype using Cookiecutter, with a focus on Domain Driven Design, SQLAlchemy 2.0 models, and a robust CRUD manager. Our commitment to code quality is evident through the integration of bandit, pylance, pylint, isort, flake8, and ruff.
- Crafted a comprehensive Python backend development roadmap that transcends traditional learning guides. Starting from foundational concepts for beginners, the roadmap progresses through intermediate stages covering debugging, web services, CI/CD pipelines, and advanced principles such as containerization, design, and security. At the advanced level, the journey delves into nuanced topics including concurrency, metaclasses, event-driven architecture, and extensive coverage of advanced design, monitoring, logging, and cloud services.
- Transformed a basic script into a modular Insomnia configuration tool actively employed by the API design team. By introducing classes and Jinja templates, we enhanced the tool's maintainability, creating a more adaptable and user-friendly solution.

Panelais Producciones S.A.

PYTHON ENGINEER & SYSADMIN - FULL TIME   *Mar. 2022 - Dec. 2022*

- Designed and developed a web application using Django, integrated with multiple Microsoft SQL Server databases. This application facilitates the efficient management of internal company processes and offers real-time data visualization for machines and continuous production lines.
- Conducted in-depth analysis and optimization of complex SQL queries across multiple databases, enhancing data retrieval efficiency and system performance.
- Administered Linux servers to: maintain data extraction services via IoT messaging (MQTT), deploy multiple web pages, and monitor databases through Python scripting, ensuring seamless system operation.

Sidisel Electrónica S.L.

PYTHON DEVELOPER - INTERNSHIP CONTRACT *Jan. 2022 - Feb. 2022*

- Utilized GitLab for version control and incident management.
- Employed Docker for microservice deployment and management.
- Conducted functional testing of servers' API using Pytest and Tox.
- Integrated Django with services like Wagtail for enhanced functionality.
- Collaborated on Python client interactions with microservices.
- Developed Python/Django-based microservices for transaction and basic information management.

Ecoinnotec S.L.

SYSADMIN - INTERNSHIP CONTRACT *Jul. 2021 - Sep. 2021*

- Designed and implemented a RESTful API monitoring solution for Windows and Linux using Python and Flask.
- Developed scripts for deploying Odoo ERP servers.
- Provided IT Helpdesk support, addressing a wide range of technical issues.
- Conducted PC setup and configuration for new employees.
- Performed general IT troubleshooting tasks.

Projects

Final Degree Project - Monitor   *Salamanca, Spain*
UNIVERSITY OF SALAMANCA   *Jun. 2021 - Jul. 2022*

- A **FastAPI** based agent capable of command execution, deployed on hosts that require monitoring.
- The agent sends requests to a **Django/Django REST Framework** web app that manages data and presents it.
- The web app is deployed with **Nginx** and **Uvicorn** for the Web Server, **Redis** for the background tasks and **PostgreSQL** for the database.
- Deployment of the web app is done with **Docker**.
- **Final Grade**: 10 with Honours.

Honors & Awards

NATIONAL

Dec. 2020	**Semifinalist**, II National CyberLeague	*Online*
Nov. 2019	**17th finalist**, I National Cyberleague	*Madrid, Spain*
Sep. 2019	**Participant**, 1st Regional Cybersecurity Forum	*Salamanca, Spain*
Oct. 2018	**1st Classified**, I National Cyberleague at USAL	*Salamanca, Spain*

Writing

Personal Blog   *www.pablogonzalez.me*
FOUNDER & WRITER   *Oct. 2019 - Present*

RFID tag with encoded personal information for forensic use, located under a dental filling, a crown or on a dental prosthesis
CO-AUTHOR   *Oct. 2020*

- https://www.ijasrjournal.org/wp-content/uploads/2020/10/SEP13X-20.pdf