Alejandro Pérez

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PROFILE

I am a senior Software Developer with over 20 years field experience, from systems administration to coding, architecting and team leadership. Strong foundation in engineering principles with current focus on distributed systems and AI technologies. Primary expertise in Python, with extensive experience in C#, SQL, and JavaScript.

Proven track record of building and deploying production systems and leading software teams to deliver impactful solutions. Committed to clean code practices, SOLID principles, and building maintainable, scalable applications. Currently working on IoT, Big Data, cloud technologies and AI.

Throughout my career, I built multiple systems by collaborating closely with end users, research teams and stakeholders, gaining hands-on experience in translating ideas into impactful, real-world solutions.

TECHNICAL SKILLS

Programming Languages

Python, R, C#, VB.net, JavaScript, SQL, HTML/CSS

Frameworks & Libraries

Flask and FastAPI, .NET Framework, .NET Core, React, Node.js

Databases

SQLite, PostgreSQL, MySQL, SQL Server and MS Access, MongoDB, AWS RDS, DynamoDB, ElastiCache, Aurora

Cloud Platforms

AWS (EC2, S3, Lambda, RDS, CloudFormation, EMR, Kinesis, Glue, Redshift, Athena)

Methodologies

Agile, SCRUM, CI/CD, Test-Driven Development, Clean Architecture

AI/ML

Pandas, numpy, scikit-learn, matplotlib, TensorFlow, Keras, PyTorch, Hugging Face, LangChain, OpenAI API, AWS SageMaker, AWS Bedrock, Jupyter Notebooks, OpenCV

EDUCATION

MSc in Computer Science

University of La Laguna (ULL) 09/2014 - 07/2015 | SANTA CRUZ DE TENERIFE, SPAIN MSc in Computation specialized in Artificial Intelligence.

Computer Science Engineering

University of La Laguna (ULL) 09/1996 - 07/2003 | SANTA CRUZ DE TENERIFE, SPAIN

WORK EXPERIENCE

Technical Leader

XalDigital.com

06/2023 - present | SANTA CRUZ DE TENERIFE, SPAIN

Lead technical strategy and development for AI/ML and IoT projects serving enterprise clients across multiple industries. Design and develop end-to-end solutions, coordinate software development team in Spain, and ensure delivery of scalable, production-ready applications. Drive technology selection, establish development best practices, and mentor team members on modern software engineering principles.

- Designed a computer vision application for quality control for an international tobacco company, implementing automated defect detection and process optimization.
- Designed. developed and deployed a real-time video analysis application for a major video streaming company, leveraging LLMs to analyze live video content and assist in automated social network content production.

Software Architect

<u>System73.com</u>

10/2017 - 09/2019 | SANTA CRUZ DE TENERIFE, SPAIN

Promoted to lead architectural evolution of the P2P streaming platform and drive technical strategy for new product initiatives. Managed a large team of software developers (20+), designed scalable system architectures, established development standards, and mentored the engineering team on software development best practices. Led technical decision-making for platform expansion, performance optimization, and integration of emerging technologies to gain competitive advantage in the live streaming market.

 Led technical standards implementation across development teams, improving code quality and deployment reliability. Designed microservices architecture migration, enhancing system modularity and enabling rapid feature development.

Backend Software Developer

System73.com

11/2015 - 09/2017 | SANTA CRUZ DE TENERIFE, SPAIN

Served as an early team member and lead backend developer for an innovative P2P live video streaming platform. Implemented scalable backend services in Python on AWS infrastructure to support real-time video distribution across a WebRTC P2P network. Designed core systems for stream orchestration, and distributed content delivery, handling the technical challenges of a live video streaming platform.

- Built distributed backend microservices architecture supporting thousands of concurrent video streams with minimal latency.
- Developed AWS-based infrastructure for stream management, user authentication, and real-time analytics.

Fisheries Information Systems Specialist

IATTC

01/2007 - 03/2014 | LA JOLLA, CA, USA

Developed and maintained scientific computing applications for the IATTC, supporting international fisheries research and conservation efforts. Modernized legacy systems, automated data processing workflows, and contributed to global fisheries management databases.

- Helped convert Length-Frequency and Species Composition Estimation programs from FORTRAN to SQL stored procedures, modernizing legacy scientific computing systems and improving performance and maintainability.
- Contributed to the development of the <u>FAO's Global Record</u> of <u>FIshing Vessels</u>, supporting global fisheries management and conservation efforts.
- Contributed automating graph and data summarization for Fisheries Status Reports (FSR).

Systems Administrator

Spanish Institute of Oceanography 01/2003 - 12/2006 | SANTA CRUZ DE TENERIFE, SPAIN

• Gained extensive hands-on experience in networking, security and firewalling infrastructure management, as well as fisheries management applications and databases.

SOFT SKILLS	LeadershipProblem solvingCommunication
LANGUAGES	Spanish: NativeEnglish: Professional
CERTIFICATIONS	AWS Certified Cloud PractitionerAWS Certified IA Practitioner