

Mauricio Endara León

Software Solution Architect | Senior Full Stack Developer | AI Engineer

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Professional Profile

Systems engineer with more than 13 years of experience leading the full software development lifecycle, from discovery and architecture through implementation, knowledge transfer and support. As a co-founder of Biosfera Software, I have led custom business solutions and AI-first systems that integrate language models, knowledge retrieval and automation into business processes. My work combines software architecture, full stack development and AI engineering, with an emphasis on security, maintainability, integration and quality control.

Consulting Expertise

Solution architecture: designing robust, scalable and maintainable enterprise and AI-first systems integrated with client processes.

Applied artificial intelligence: integrating language models, RAG, knowledge bases, structured outputs, tools and human review into business applications.

IT consulting and strategy: analyzing needs, prioritizing scope and translating business objectives into specifications and technical roadmaps.

AI security and governance: access control, information separation, traceability, response evaluation, privacy by design and controls against prompt injection.

Technical leadership and mentoring: leading and training teams in architecture, design patterns, development practices and code quality.

System integration: connecting applications, services and ERPs such as SAP, Oracle, Coupa and JD Edwards through APIs and interoperability processes.

End-to-end project management: leading projects from requirements discovery through deployment, documentation, training and ongoing support.

Selected Professional Experience

Co-founder and solution architect | Biosfera Software, previously Alter Bios Soluciones (November 2013 - present)

As a technical and strategic leader, I am responsible for the vision and execution of the company's software projects. My responsibilities include discovery, architecture, development, team coordination, deployment and technical client relationships.

Relevant work and projects

AI-first systems: designing and implementing solutions that integrate LLMs, OpenAI API, RAG, tools, structured outputs and human review into operational applications.

Enterprise architecture: defining modular solutions with Java and Spring, React and TypeScript, Python, REST and SOAP services, SQL and NoSQL databases, and React Native mobile applications.

Knowledge and traceability: designing document ingestion, chunking, embeddings, semantic search, metadata, citations, knowledge freshness checks and abstention behavior.

Delivery and operations: deployments on AWS, GCP and DigitalOcean; automation with GitHub Actions, GitLab CI and Ansible; quality control with SonarQube, ESLint and Checkstyle.

Leadership and knowledge transfer: team management, mentoring, technical documentation, user training and support after delivery.

Project director | ANF Certification Authority Ecuador (July 2012 - October 2013)

Managed electronic signature and security implementation projects, coordinating development teams and ensuring technical and business objectives were met.

Junior to senior software developer | ANF Certification Authority Ecuador (June 2011 - June 2012)

Developed Java desktop and web applications and APIs connecting digital certification services with third-party systems, working with security and interoperability requirements.

Technical Skills

Artificial intelligence and LLMs

OpenAI API, RAG, embeddings, semantic and vector search, knowledge bases, prompt engineering, context management, function calling, tools, structured outputs, evaluation and observability.

Languages and frameworks

Java, Spring, JEE, Python, React, TypeScript, JavaScript, React Native, JSF, Java Swing, REST APIs and SOAP services.

Databases

PostgreSQL, MySQL, MariaDB, Oracle, MongoDB, Elasticsearch, relational modeling, metadata and data integration.

Cloud and DevOps

AWS, GCP, DigitalOcean, Netlify, Linux, Windows Server, GitHub Actions, GitLab CI, Ansible and deployment automation.

Principles and methodologies

Design patterns, UML, entity-relationship modeling, software development lifecycle, Scrum, security, privacy, traceability and testing.

Education and Certifications

Computer Systems Engineering | Escuela Politécnica del Ejército ESPE | 2013

Big Data and Data Analytics | CEC EPN | 2016

Diploma in Video Game Development | Universidad de las Américas | 2021

CCNA Exploration 4.0 Networking Fundamentals | Cisco Networking Academy | 2009

Languages

Spanish: native

English: professional