

Ricardo Villanueva

Solutions Architect – Pre Sales

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Summary

Solutions Architect with 15+ years of experience designing distributed systems, developer platforms, and modern data architectures. I work at the intersection of applications, data infrastructure, and AI, helping organisations design scalable systems and adopt emerging technologies.

My background as a software engineer allows me to translate complex technical concepts into practical architectures and guide engineering teams through implementation. I bring individuals, teams, and companies together to build solutions to complex problems and to bring visions to life.

In technical sales roles, I lead architecture design, proof-of-concepts, and developer enablement for large organisations adopting modern platforms. I am particularly interested in AI-native application architectures, LLM orchestration, and developer frameworks that enable teams to build intelligent systems quickly, reliably, and with positive and sustainable returns.

Core Skills

AI & Application Architecture

- LLM application architecture
- Retrieval-Augmented Generation (RAG)
- Vector databases and semantic search
- AI developer frameworks and orchestration layers including LangGraph
- Distributed data architectures
- Microservices and event-driven systems
- Cloud-native application platforms
- API-first and developer platforms

Technical & Leadership Skills

- Technical sales
- Strategic planning
- Team leadership

- Professional services
- SaaS platforms
- Cloud Computing
- Full-stack development
- Agile methodologies
- Project management

Developer Technologies

- Python
- Node.js / TypeScript
- Java & Kotlin
- REST & GraphQL APIs
- Kubernetes & container platforms
- distributed systems architecture
- Cloud infrastructure (AWS/GCP/Azure)

Experience

Solutions Architect

MongoDB, London, UK

02/2025 - Present

At MongoDB I partner with organisations building modern applications to design scalable data architectures and developer platforms. I lead the technical strategy for complex opportunities, helping engineering teams modernise legacy systems and adopt architectures that support AI-enabled applications, real-time data processing, and globally distributed workloads.

Core responsibilities:

- Lead technical discovery and architecture design for enterprise customers adopting MongoDB.
- Design scalable application architectures across cloud environments using microservices and event-driven systems.
- Deliver architecture workshops and proof-of-concepts for engineering teams evaluating MongoDB-based platforms across enterprise workloads.
- Advise customers on data modelling, distributed databases, and application performance optimisation.
- Guide migrations from relational databases and legacy systems to modern document-based architectures.
- Support architecture design for AI-enabled applications using vector search, retrieval-augmented generation (RAG), and modern data platforms.
- Collaborate with product and engineering teams to relay field insights and improve developer experience.
- Contribute reusable architecture patterns, technical assets, and developer enablement material for internal teams and customers.

Sales Engineer

Comcast Technology Solutions, London, UK

03/2022 – 02/2025

At CTS I became the technical lead in our sales organisation responsible for the technical win of all opportunities in Europe, Asia, and Africa. As a Sales Engineer, I bring different organisations together to solve problems in the media industry, coordinating distributed systems and platform components across multiple internal and third-party services, allowing Comcast to prime multi-million proposals. During this journey, I had the privilege to lead different teams, I also contributed technical guidance to product and partner engineering teams to improve platform capabilities. I also serve as technical sales lead of large groups of diverse professionals to create scalable, resilient, and future-proof solutions.

Core responsibilities:

- Prepare and present technical deal reviews.
- Provide technical subject matter expertise through demos and workshops.
- Support Deal Desk reviews, ensuring realistic quotes.
- Prospects qualification.
- Requirements gathering.
- Coordination of RFP and RFI responses.
- Support Professional Services in drafting SOWs based on intel from deals.
- Identify and document product gaps and communicate them to product teams.

Senior Software Engineer

Expedia Partner Solutions, London, UK

01/2020 – 03/2022

Core responsibilities:

- Collaborate with stakeholders to develop effective solutions.
- Guide integrations between Expedia products and partners' services.
- Design and Implement solutions ensuring alignment between structure, people, processes, and technologies.
- Advise on the technical limitations of software designs and provide alternative solutions.
- Mentoring of junior engineers.
- Engineering management of squad teams.
- Gather requirements from internal and external clients.
- Produce technical documentation for integration partners.

Senior Solutions Engineer

Comcast Technology Solutions, London, UK

05/2018 – 08/2019

Core responsibilities:

- Design and implement software engineering solutions for new and existing clients.
- Extend the products' APIs to meet internal and external requirements.
- Prototype new features and hand them over to product teams after testing in safe environments.
- Write and maintain tests to ensure platform stability at all levels.
- Secure all the applications and monitor any potential security failure.
- Provide technical support for all the different applications in different versions.
- Ensure the product's scalability.
- Support Pre-sales engineers by providing product guidance.

Senior Software Engineer

Ooyala, London, UK

04/2017 – 05/2018

Core responsibilities:

- Requirements gathering.
- Design and develop modern web applications and Restful APIs.
- Technical leadership of projects.
- Project estimations.
- Document products and train clients and peers on how to use them.
- Define and implement unit tests, integration tests, and acceptance tests.
- Review and approve team changes for code quality control.
- Write clear, concise, and comprehensive technical documentation.

Senior Software Engineer

British Broadcasting Corporation (BBC), London, UK

04/2016 – 04/2017

Core responsibilities:

- Technical design and development of web applications.
- Technical leadership of projects and mentoring of more junior team members.
- Research and implementation of recent technologies.
- Write unit tests and integration tests within automated test-driven environments to ensure code quality.
- Write clear, concise, and comprehensive technical documentation.
- Monitoring of critical services created for journalists in the field like iBroadcast and Media Tools.

For more information about my previous experiences in IT since 2008, please visit my [LinkedIn](#) profile. Here is a summary:

Software Engineer - Nativ, London, UK, 2014-2016

Software Developer- Spacebar Media, London, UK, 2014

Analyst Programmer - Balidea Consulting & Programming, Spain, 2012-2014

Systems Analyst - Comercial Belloso, Venezuela, 2008-2012

Systems Analyst & Support - Himar, Venezuela, 2005-2008

Certifications & Professional Development

- MongoDB Certified Atlas Administrator
- MongoDB Certified Database Administrator
- MongoDB Certified Developer
- [+26 Skills badges and certifications on MongoDB systems](#)
- Data Science and Deep Learning for Business.
- Statistical Methods oriented to parametric and non-parametric tests.
- Kubernetes at scale.
- AWS - Security Operations on AWS.

- ITIL® Foundation Certificate in IT Service Management.
- Leadership Coaching.
- Inclusion & Diversity - Organisational Leader.
- Emotional Intelligence.

Selected Projects

Bluteksbot – Multi-Agent AI Assistant

- Designed a lightweight multi-agent AI assistant integrating messaging platforms and LLM workflows.
- Implemented orchestration patterns for agent coordination and tool execution.
- Focused on efficient runtime cost and minimal infrastructure footprint.

AI Agent Framework Experiments

- Built experimental LLM agent architectures exploring RAG pipelines and tool-calling workflows.
- Implemented vector search and semantic retrieval patterns for AI applications.
- Evaluated model orchestration strategies across multiple providers.

Self-Hosted AI Infrastructure Lab

- Kubernetes-based environment for prototyping AI systems and distributed services.
- Deployed containerized developer tools, databases, and LLM infrastructure.
- Built reusable infrastructure patterns for AI experimentation.

Education

Master's information technology and Intelligent Systems

University of Santiago de Compostela, Spain, 2012-2013

Diploma in Strategy and Innovation

University of Santiago de Compostela, Spain, 2013-2013

BSc Systems Engineering

University of the Armed Forces, Venezuela, 2006-2012

Personal Details

Nationalities: Spanish, Venezuelan, and processing English nationality.

Visas: Not required – With settled status in the UK.

Languages: English – Bilingual, Spanish – Native, French – Elementary.

Driving License: Spanish driving license.