

Jose Antonio Serrano Peña

Senior Full Stack Developer

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PROFESSIONAL PROFILE

Senior Full Stack Developer with 7+ years of experience delivering scalable web applications and cloud-native platforms. Proficient in TypeScript, JavaScript, Vue 3, React, NestJS, Node.js, and AWS, with deep expertise in microservices architecture, PostgreSQL, Redis, and gRPC. Currently driving platform modernization at Harvard University. Proven track record of improving API performance by up to 35%, automating workflows, and integrating AI-driven features. Passionate about accessibility, clean architecture, and continuous improvement in agile, globally distributed teams.

TECHNICAL SKILLS

Frontend	Vue 3, Nuxt 3, React, Next.js, Angular, TypeScript, JavaScript, HTML5 & CSS3, Storybook
Backend	NestJS, Node.js, Express, gRPC, REST APIs, GraphQL, Apollo, n8n
Data & Cloud	PostgreSQL, MongoDB, MySQL, Redis, MikroORM, AWS, GCP, Docker
Tools & AI	Git, React Native, OpenAI API, MCP (Model Context Protocol), Figma
Languages	Spanish (Native) · English (Professional)

WORK EXPERIENCE

Unosquare — Harvard University LXP *May 2024 – Present*

Senior Full Stack Developer

Developed and maintained scalable LXP features using Vue 3, Nuxt 3, NestJS, MikroORM, PostgreSQL, Redis, gRPC, and AWS in a microservices architecture. Collaborated with cross-functional teams across US and EU time zones in an Agile/Scrum environment.

- Optimized API performance and caching strategies, reducing response times by 35% across critical microservices.
- Led migration initiatives to modernize legacy systems, ensuring 99.9% uptime and seamless data synchronization across services.
- Implemented WCAG 2 AA accessibility standards across the platform, improving inclusivity and compliance.

Unosquare — Behavox *Feb 2022 – May 2024*

Senior Full Stack Developer

Built high-performance web applications for a behavioral analytics platform using React, Next.js, TypeScript, and NestJS. Integrated external APIs via AWS API Gateways and implemented AI-driven features using OpenAI APIs.

- Designed and integrated OpenAI-powered features for behavioral analytics, improving enterprise decision-making workflows.
- Built scalable NestJS microservices secured via AWS API Gateways, enhancing system reliability and security.
- Automated critical workflows using CRON jobs, increasing overall team efficiency by 30%.

Infosys — Client Projects *Feb 2021 – Feb 2022*

Frontend Developer (Mid-level)

Developed modular front-end components using React and TypeScript under a micro-frontend architecture. Integrated GraphQL microservices with Apollo Client and contributed to NestJS backends.

- Designed and implemented micro-frontend architecture with React/TypeScript, reducing release cycles by 20%.
- Integrated GraphQL with Apollo Client, significantly improving data-fetching performance and application responsiveness.
- Delivered an invoicing component that reduced processing time by 70%, significantly increasing analyst efficiency.

R3D – Enterprise Backend *May 2020 – Feb 2021*

Backend Developer (Junior)

Developed RESTful APIs with Node.js and Express integrated into React applications. Built AWS Lambda microservices for scalable request handling.

- Developed and deployed REST APIs with Node.js/Express consumed by React frontends, supporting enterprise-level data flows.
- Built AWS Lambda microservices enabling automatic horizontal scaling to handle variable request loads.
- Collaborated with senior engineers to improve backend architecture reliability and maintainability.

YOIN – Client Web Applications *Jun 2019 – May 2020*

Web Developer (Junior)

Built front-end components with Angular 7 and integrated REST APIs. Designed and implemented an Alexa Skill using AWS services and database connectivity.

- Built Angular 7 front-end components integrated with REST APIs, improving application responsiveness and user satisfaction.
- Designed and deployed an Alexa Skill using AWS services with database integration, enabling voice-command product interactions.
- Innovation adopted by clients, significantly improving end-user engagement and reducing support requests.

PINCODE – Web Development *Apr 2018 – Jun 2019*

Web Developer

Designed and developed landing pages and single-page applications using HTML5, CSS3, and JavaScript. Integrated Firebase cloud services for authentication and hosting.

- Delivered production-ready SPAs and landing pages with HTML5, CSS, and JavaScript in a live client environment.
- Integrated Firebase authentication and hosting, reducing deployment overhead and improving application security.
- Consumed REST APIs using Axios, building dynamic data-driven interfaces for multiple client projects.

EDUCATION

UTC Insurgentes *Jan 2018 – Sep 2022*

B.Eng. Computer Systems Engineering

CERTIFICATIONS

Model Context Protocol: Advanced Topics – Anthropic *May 2026*

Introduction to Model Context Protocol – Anthropic *May 2026*

Claude Code in Action – Anthropic *Apr 2026*

AI Capabilities and Limitations – Anthropic *Apr 2026*

NestJS Authentication & Authorization – NestJS *Jan 2024*

NestJS Advanced Concepts – NestJS *Dec 2023*

NestJS Fundamentals – NestJS *Jul 2021*

MongoDB for JavaScript Developers – MongoDB University *Sep 2020*

MongoDB Basics – MongoDB University *Aug 2021*