

Juan Sebastián Ospina Losada

Software Engineer

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Summary

Software Engineer with 2+ years of experience building scalable web applications using **Python**, **JavaScript**, **React**, and **Angular**. Proven track record in designing full-stack solutions, integrating real-time features, and collaborating in Agile environments. Passionate about clean code and user-centric development.

Technical Skills

- **Languages:** Python (Intermediate), JavaScript (Intermediate)
 - **Frontend:** React, Angular, HTML/CSS
 - **Backend:** Django, NestJS, REST APIs
 - **Data/ML:** Pandas, scikit-learn
 - **Tools:** Git, WebSockets, Agile (SCRUM/Kanban)
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Professional Experience

Unidad Nacional de Protección

Software Engineer | *Sep 2024 – Present*

- Developed authentication system for internal/external users using React (frontend) and Python/Django (backend), improving security and user experience.
- Built a real-time voting system with WebSocket integration, enabling instant data synchronization for 500+ concurrent users.
- Collaborated with cross-functional teams to ensure compliance with government security standards.
- Led the integration of AI-driven tools and workflows into existing software solutions, enhancing automation, data analysis, and decision support within the organization.

Ospixel

Software Engineer | *Apr 2024 – Aug 2024*

- Designed and implemented an **e-commerce platform** using **Angular (frontend)** and **NestJS (backend)**, reducing page load time by 30%.
- Optimized API performance, achieving 95% uptime during peak traffic periods.

Universidad Surcolombiana

Software Developer | *Jul 2023 – Apr 2024*

- Led development of a **accounts payable module** in **Angular**, streamlining financial operations for 10k+ users.
 - Contributed to code reviews and mentored 3 junior developers on best practices.
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Key Projects

Real-Time Voting System

- Engineered a WebSocket-driven platform for real-time voting, reducing latency to <200ms.
- **Stack:** React, Django, PostgreSQL, Docker.

Ticket Management Platform

- Developed a full-stack system for event ticketing with real-time seat availability, secure payments, and role-based access. Integrated deployment on Vercel and optimized backend for high concurrency.
- **Stack:** NextJS, Better-Auth.

AI Chatbot with Contextual Memory

- Built an intelligent chatbot powered by Gemini API with contextual understanding from .txt documents. Designed prompt chaining and dynamic context injection to simulate human-like responses across topics.
- **Stack:** TypeScript, Gemini API, Node.js, LangChain.

MCP for Natural Language to SQL Search

- Developed a Modular Context Protocol (MCP) service enabling vector-based semantic search over JSON datasets of natural language questions, dynamically generating optimized SQL queries for database execution.
 - **Stack:** FastMCP, Python, PostgreSQL, OpenAI/Gemini Embeddings, JSON Schema.
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Education

Bachelor's in Software Engineering

Universidad Surcolombiana | 2018 – 2023

Languages

- Spanish (Native)
- English (Intermediate)