Mauricio Alejandro Bernal Rodríguez

Backend Developer (Node.js · PHP · SQL)
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Github — LinkedIn

Summary

Backend Developer with experience building real-world applications using Node.js, PHP and MySQL. Skilled in REST APIs, real-time communication (WebRTC, Socket.io), authentication, SQL optimization and Linux environments. Strong focus on reliability, clean architecture and solving practical backend challenges.

Technical Skills

Backend: Node.js, Express.js, PHP
Databases: MySQL, PostgreSQL, relational design, SQL optimization
Real-time / Networking: WebRTC, Socket.io, REST, HTTP
Systems / DevOps: Linux, Bash, Nginx, Docker (basic), GNS3, PRTG, VLAN/NAT/OSPF
Web: HTML, CSS, JavaScript, Bootstrap
Tools: Git, GitHub, VSCode

Projects

Pet Store Management System — PHP + MySQL   GitHub

- Full backend system managing clients, products, suppliers and sales.

- User authentication with sessions, roles and access control.

- Generated invoices in PDF and created sales dashboards with charts.

- Designed and optimized relational database (FKs, indexes, joins).

- Built UI with Bootstrap ensuring clean interaction for store operations.

Real-time P2P Chat — Node.js, WebRTC, Socket.io   GitHub

- Implemented peer-to-peer chat communication using WebRTC.

- Built a custom signaling server with Express.js + Socket.io.

- Added private room creation and real-time message events.

ForwardLogic Engine — Java (Academic)   GitHub

- Forward-chaining inference engine with GUI.

- Rule creation, fact evaluation and reasoning visualization.

Education

Technologist in Data Systematization
Universidad Distrital Francisco José de Caldas
Software development, databases, algorithms and systems.

Languages and Certifications

Languages: Spanish (Native), English (C2 — EF SET 72/100)
Certifications: JavaScript Algorithms and Data Structures — freeCodeCamp (2024); EF SET English Certificate — C2 Proficient (2025)