

CARLOS ARMANDO GARDEA HERNÁNDEZ

Software Engineer · Laravel · PHP · React · DevOps

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PROFESSIONAL PROFILE

Software Engineer specialized in Laravel architectures with a full-stack mindset. Proven experience delivering production systems: a multi-organization union CMS and a university thesis management platform that achieved a +70% increase in graduation efficiency — both systems verifiable in production at carlosgardea.com. Currently building a personal portfolio of 9 advanced-architecture applications on self-managed infrastructure (VPS, Docker, Traefik v3, PostgreSQL 18), implementing patterns including Event Sourcing, CQRS, gRPC, and ML workers. AI-augmented workflow: active use of agents, local LLMs (Ollama, LM Studio), and tools like Cursor and Claude Code to accelerate development without compromising architectural quality. Background in industrial manufacturing environments at Bosch. B2 English certified (Oxford University).

TECHNICAL STACK

Backend	Laravel 12 · PHP 8.5 · REST API · Event Sourcing · CQRS · DDD · gRPC
Frontend	React 19 · TypeScript 5.9 · Inertia.js 2.0 · Tailwind CSS v4 · Filament 4 · Livewire 4
DevOps	Docker 29 · Traefik v3 · VPS Ubuntu 24.04 · CI/CD GitHub Actions · K3s/Kubernetes · UFW · Fail2Ban
Data	PostgreSQL 18 · Valkey 8.0 · Meilisearch 1.12 · Queue Workers · Laravel Horizon
Polyglot	Rust (FFI) · Go 1.25 (gRPC microservices) · Python 3.14 (ML workers) · OpenTelemetry
Quality	Pest PHP · Larastan/PHPStan · PHPDoc · Mutation Testing · Vitest · Playwright · Laravel Pint · PHP CS Fixer
AI / Dev	Cursor · Claude Code · GitHub Copilot · Trae · Ollama · LM Studio · AI Agents
Tools	Git · WSL2 · Linux · PHPStorm · Postman · PhpSpreadsheet · SendGrid API

WORK EXPERIENCE

Software Engineer · Personal Portfolio Nov 2025 – Present

Ciudad Juárez, MX · Self-managed VPS · carlosgardea.com

- ▶ 9 advanced-architecture web applications built from scratch on self-managed infrastructure: Docker 29, Traefik v3, PostgreSQL 18, Valkey 8.0, Meilisearch 1.12, CI/CD via GitHub Actions, and automatic SSL.
- ▶ Stack: Laravel 12 · PHP 8.5 · React 19 · TypeScript 5.9 · Inertia.js 2.0 · Tailwind CSS v4. Polyglot: Rust (FFI for high-precision computing), Go 1.25 (gRPC microservices), and Python 3.14 (ML workers).
- ▶ Multi-organization CMS with full-text search (Meilisearch) · university platform with workflow engine and real-time WebSockets · immutable payroll system with audit trail (Event Sourcing) · Infrastructure monitoring with Go microservices and K3s.
- ▶ Multi-tenant SaaS with per-organization data isolation (Filament 4) · audio transcription with Python ML models · public API with auto-generated SDK (Next.js 15) · TALL stack help desk (Livewire 4 + Volt).

Software Engineer · CROC Chihuahua Oct 2024 – Nov 2025

Ciudad Juárez, Chihuahua · Sole developer · Live system: crocchihuahua.com

- ▶ Designed and built solo a CMS to manage the digital presence of 12 industrial unions in Ciudad Juárez (Lear, Flextronics, Jabil, Cordis).
- ▶ 4-level RBAC, per-organization/date analytics, WYSIWYG editor (Quill.js), multi-level hierarchical filtering system with optimized queries.
- ▶ Stack: PHP · MySQL · JavaScript · Quill.js · SendGrid API. The system is actively in production; it was rebuilt with enterprise architecture available in the portfolio.

Systems Analyst · Robert Bosch México — Brake Systems Sep 2023 – Aug 2024

Ciudad Juárez, Chihuahua · Automotive manufacturing · (Concurrent with thesis project)

- ▶ Technical support for 200+ users across all organizational levels: plant manager, directors, manufacturing engineers, HR staff, supervisors, and team leads.
- ▶ LAN/WAN troubleshooting, server and OS installation and configuration, and remote and on-site support under Bosch corporate SLA standards.

- ▶ External vendor coordination: hardware reception, warranty management, and second-level ticket escalation.

Project Lead · Instituto Tecnológico de Ciudad Juárez (TecNM) Aug 2022 – Aug 2024

Senior thesis project · In production since 2023 · Live system: login.tsoft.website

- ▶ Web platform for managing the university thesis and graduation process. We achieved a +70% increase in graduation efficiency by automating the end-to-end workflow.
- ▶ Multi-level architecture (6 user types), bulk Excel import (PhpSpreadsheet), automated Word/PDF document generation, SendGrid email notifications per workflow stage.
- ▶ 8 months of active development and 12 months of production operation and monitoring. Stack: PHP · MySQL · JavaScript · PhpSpreadsheet · FPDF · SendGrid. The rebuilt version is available in the portfolio.

EDUCATION

B.Eng. in Computer Systems Engineering Aug 2018 – Dec 2024

Instituto Tecnológico de Ciudad Juárez (TecNM) · *Specialization: Advanced Software Development*

- ▶ Thesis: "Design, development, and implementation of a web application as a complementary platform for managing the graduation process at the TecNM Ciudad Juárez campus."
- ▶ LOGO! Cloud Challenge — Siemens México (2022): a web prototype connected to a LOGO! PLC via AWS IoT Core for real-time campus electricity consumption monitoring; an interdisciplinary project (Systems + Mechatronics) for a national competition.

LANGUAGES & AVAILABILITY

Spanish: Native · **English:** B2 Upper-Intermediate (Oxford University Certificate) · **Availability:** Immediate · On-site / Remote / Hybrid