

Cristian Arellano Muñoz

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Summary

Backend Engineer focused on production Python systems for e-commerce, telecom and enterprise. Specialized in Domain-Driven Design (DDD), multi-tenant architectures, REST + GraphQL APIs and complex payment / inventory integrations. Currently architecting Shoppipai — an enterprise e-commerce platform structured in 27 DDD modules with Stripe/Wompi, electronic invoicing (DIAN Colombia) and pgvector semantic search. Primary stack: Python · Django · DRF · FastAPI · Strawberry GraphQL · PostgreSQL · Redis · Celery · Docker · Kubernetes.

Experience

Backend Engineer — Shoppipai, Independent Development – Cali, Colombia Dec 2025 – present

- Designed and implemented the architecture of an enterprise e-commerce platform structured in 27 DDD modules with per-tenant data isolation across Free/Pro/Enterprise plans.
- Built a dual REST + GraphQL API on Django 5.2 LTS and Strawberry GraphQL — covering catalog, checkout, inventory and admin.
- Integrated Stripe and Wompi payment gateways with saga-style checkout and Outbox pattern; electronic invoicing via Factus API (DIAN Colombia), including credit notes.
- Engineered a multi-warehouse inventory system with allocations, reservations and automatic stock release orchestrated via Celery.
- Configured enterprise security: JWT RS256, 2FA with django-otp, RBAC, full audit logging, and rate limiting.
- Implemented semantic search with Meilisearch and RAG with Meta AI using pgvector for product embeddings.
- End-to-end observability with Sentry, Prometheus, OpenTelemetry and structlog.

IT Support & Systems, CDA La Luna – Cali, Colombia Jan 2025 – Nov 2025

- Administered network and server infrastructure (Linux/Windows) ensuring operational continuity of the site.
- Designed automated backup policies and security hardening; minimized incident recovery time.
- Delivered preventive maintenance and end-to-end technical support for critical equipment.

L2/L3 Support Analyst, SIESA (Enterprise Information Systems S.A) – Cali, Colombia June 2024 – Dec 2024

- Resolved L2/L3 escalations of complex incidents in SIESA ERP and SIESA POS coming from first-line support, against aggressive SLAs.
- Deployed and configured servers and the full company product portfolio at enterprise customers.
- Parameterized systems and commercial master data, POS configuration and deep software troubleshooting.

Python Developer & Technical Support, American Telnet – Cali, Colombia July 2023 – Dec 2023

- Led architecture and development of a Python automation suite orchestrating critical technical workflows — 70% reduction in operational response time (SLA).
- Massive data processing with pandas/requests/paramiko and remote SSH/SFTP connection management to distributed equipment.
- RPA with Selenium WebDriver: intelligent bots for legacy web portals without public APIs, eliminating repetitive manual work.
- HTTP/REST + WebSockets middleware between CCTV hardware and central software platforms; real-time bidirectional sync.
- Internal CLI tools for LAN/WLAN network diagnostics with automatic detection of bottlenecks and anomalies.

Inventory & Automation Analyst, Tigo Colombia – Cali, Colombia Sept 2022 – June 2023

- Designed and maintained custom Python applications to digitize inventory control across regional warehouses, replacing manual Excel-based processes.
- Built statistical forecasting models that improved demand prediction accuracy and stock planning.
- Automated ETL pipelines to consolidate and clean data from CRM and POS sources; feeding real-time operational dashboards.
- Optimized distribution logistics across multiple regional warehouses through historical product rotation analysis.

IT Support & Systems, CDA Automor 14 Calimax – Cali, Colombia Dec 2021 – May 2022

- DevOps and automation adoption with Python scripts for routine server maintenance: log rotation, disk space monitoring, early alerts.
- Administered and hardened network and server infrastructure compliant with security standards.
- Implemented automated backup policies and disaster recovery (DRP) strategies for continuous service availability.

Education

Servicio Nacional de Aprendizaje (SENA), Technologist in Software Analysis & Development – Virtual modality Sept 2025 – present

- Currently in 1st year — focus on backend development, APIs and databases.
- Two-year program in progress, 100% virtual and asynchronous, compatible with full-time employment.
- Deep dive into the software development lifecycle and agile methodologies.

Servicio Nacional de Aprendizaje (SENA), Technologist in Computer Equipment Maintenance & Networks – Popayán, Colombia Apr 2020 – Apr 2022

- Advanced administration of Linux/Windows servers, design of LAN/WAN networks, and structured cabling implementation.

Servicio Nacional de Aprendizaje (SENA), Technician in Commercial & Financial Operations Accounting – San Lorenzo, Colombia Jan 2018 – Dec 2019

- Financial analysis and proficiency with ERP systems for asset and treasury management.

Certifications

Meta Back-End Developer — Meta Apr 2025

Django Web Framework — Meta Mar 2025

APIs — Meta Mar 2025

Back-End Developer Capstone — Meta Apr 2025

Coding Interview Preparation — Meta Apr 2025

Programming in Python — Meta Feb 2025

The Full Stack — Meta Mar 2025

Introduction to Databases for Back-End — Meta Mar 2025

Databases with MySQL & MariaDB — Platzi July 2023

Django Intermediate: Testing, Static Files, Django Admin — Platzi May 2023

Introduction to Containers with Docker, Kubernetes & OpenShift — IBM	Feb 2025
Microservices & Serverless — IBM	July 2025
Django with SQL & Databases — IBM	July 2025
Application Security for DevOps — IBM	July 2025
Building AI Applications with Python & Flask — IBM	Jan 2025
Python for Data Science, AI & Development — IBM	July 2025
Git & GitHub — IBM	July 2025
Linux & Shell Scripting — IBM	July 2025
Introduction to DevOps — IBM	Jan 2025

Projects

Shoppipai — Enterprise E-Commerce Platform Jan 2024 – present

- Stack: Django 5.2 LTS · DRF · Strawberry GraphQL · PostgreSQL 15 · pgvector · Redis · Celery · Docker · JWT RS256 · Next.js 16 · React 19
- Dual REST + GraphQL API across 27 DDD modules with multi-tenant isolation, Stripe/Wompi integrations (saga + Outbox), DIAN electronic invoicing, multi-warehouse inventory, semantic search via Meilisearch, RAG via pgvector and Sentry/Prometheus/OpenTelemetry observability.

normadocs

- Stack: Python · python-docx · Click · MIT
- Open-source CLI converting Markdown to academic documents (APA 7th, ICONTEC NTC 1486) with auto cover, ToC and bibliography. Importable Python library with PEP 561 typing and CI gating on lint/tests/security.

ecommerce-api

- Stack: Python · Django 5.2 · DRF · Redis
- E-commerce REST API with Redis caching, optimized DB indexes, RBAC (admin/read-only), django-filter querying and analytics endpoints. 672 lines of test coverage.

Sistema-de-Reservas-de-Eventos-Masivos

- Stack: Python · Django · DRF · PostgreSQL · JWT
- Multi-role system (Client/Organizer/Admin) with UUID custom user model, JWT, soft-delete and modular architecture (users/events/reservations). Real-time availability and reservation confirmations with notifications.

LogisticsShippingRates

- Stack: Python · FastAPI
- Logistics rate calculation microservice by carrier, weight, distance and zone — integrated with multiple shipping providers.

Skills

Languages & Frameworks: Python (Django, DRF, FastAPI, Strawberry GraphQL, Celery), TypeScript, SQL, Bash

Data & Cache: PostgreSQL, MySQL, MariaDB, pgvector, Redis, SQLite, Meilisearch

Architecture & APIs: Domain-Driven Design, Hexagonal, Multi-tenant, Microservices, REST, GraphQL, Event-driven, JWT, OAuth

DevOps & Observability: Docker, Kubernetes, Linux, Git, GitHub Actions, Sentry, Prometheus, OpenTelemetry, structlog

Quality & Practices: pytest, TDD, Code Review, CI/CD, OWASP Top 10, Clean Architecture, SOLID

Spoken Languages: Spanish (Native), English (Advanced technical reading, intermediate writing)