

Eder Gutiérrez

BACKEND DEVELOPER

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Backend Developer · Python & Node.js · Integrations & Data Pipelines

Professional Summary

Backend Developer specializing in event-driven systems, integrations, and data pipelines. Experienced in building ETL pipelines and stream-processing workflows using Python, Node.js, and Kafka, with a focus on data consistency, fault handling, and reliable communication between services.

Technical Skills

Languages	Python, TypeScript, JavaScript, SQL, Bash
Backend	Event-Driven Architecture, REST APIs, Stream Processing, ETL Pipelines, OOP
Infrastructure	Apache Kafka, RabbitMQ, MongoDB, PostgreSQL, MySQL, Docker, Linux
Testing & Tools	Jest (Unit/Integration), Odoo ERP Custom Integrations

Experience

Wayakna

Mérida, Yucatán

BACKEND & INTEGRATION ENGINEER (TRAINEE/INTERNSHIP)

Jan. 2026 - Jul. 2026

- Engineered a bidirectional inventory synchronization system between Odoo ERP and TikTok Shop, implementing HMAC-SHA256 signature verification for strict cryptographic validation, and contributed to the core sync framework's input/output table architecture and Odoo API client methods for the broader multi-tenant integration platform.
- Consumed real-time client updates from multiple Kafka producers and routed payloads to downstream systems based on payload type, decoupling multi-client ingestion from system-specific processing logic.
- Architected a stream-based ETL pipeline to process over 500,000 SAT tax blacklist records from compressed archives, achieving a processing speed of 6,348 records/sec with a peak memory footprint of only 51 MB.
- Resolved bidirectional race conditions during cross-system data normalization via a convergence strategy prioritizing inbound polling over outbound stock pushes, and built a warehouse cross-referencing system with isolated per-client execution loops so single-API failures never halted global synchronization.
- Optimized API resource consumption by implementing diff-based change detection, a persistent MongoDB TTL cache, and a generic HTTP retry utility with exponential backoff for 429/5xx error handling.

Projects

GTFS-Realtime Stream Engine

github.com/EderGtz/GTFS

TYPESCRIPT, PYTHON, APACHE KAFKA, DUCKDB, DOCKER

- Built an event-driven pipeline that decodes raw MBTA GTFS-Realtime vehicle-position protobufs, validates telemetry, and publishes normalized events to Apache Kafka.
- Enriched telemetry with GTFS-Realtime stop metadata and GTFS-Static references, then used DuckDB for deduplication, data-quality analysis, and temporal validation.
- Containerized the streaming stack with Docker and implemented Vitest coverage for protobuf decoding, validation, polling, Kafka publishing, and topic setup.

Autonomous AI Code Agent CLI

github.com/EderGtz/LLM-Agent

PYTHON, LLM APIS, BASH, GIT

- Built a CLI agent leveraging Gemini's function-calling API to autonomously read, write, and execute files.
- Implemented an iterative agent loop featuring tool dispatch, working-directory sandboxing, and configurable iteration limits to prevent runaway executions.

Education & Certification

B.S. in Software Engineering (Specialization in Big Data)

Remote

SOFTWARE ENGINEERING STUDENT - COURSEWORK COMPLETED JUL 2026. DEGREE IN PROGRESS.

2023 - 2026

- Core coursework: Software Engineering, Data Structures, OOP, Database Design (SQL & NoSQL), Computer Networks, AI Fundamentals, Probability & Statistics.
- Big Data track: Distributed Computing, Data Analysis, Big Data Administration, & NoSQL Database Systems.

Boot.dev — Online Computer Science Academy

Remote

BACKEND & COMPUTER SCIENCE ENGINEERING PATH

2025 - Present

- Distributed Systems & Networking: Pub/Sub Messaging (RabbitMQ), HTTP Servers & Clients (TypeScript), File Servers & CDNs (S3/CloudFront).
- Computer Science Core: Advanced OOP & Functional Programming (Python), Algorithms & Data Structures, Docker Containerization, Deep Git Version Control, Linux Systems Administration