

Héctor Esteban Banderas Castillo

Backend & Systems Engineer

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CORE

Elixir, Phoenix, OTP, Broadway, GenStage, PostgreSQL, PostGIS, Redis, ETS, AWS SQS/ECS/ECR, Docker, Linux.

ALSO

Rust, embedded no_std, ESP32, TypeScript, React, Node.js, Python, Ruby, Kafka, OpenTelemetry.

PRACTICE

Distributed data, multi-tenancy, event-driven systems, REST/OpenAPI integrations, regression testing, CI/CD, production diagnosis.

LANGUAGES

Spanish: native
English: professional

PROFILE

Backend and full-stack engineer with 5+ years building production web, telemetry, geospatial, and distributed-data systems in Elixir/Phoenix, OTP, PostgreSQL, Redis, AWS, and Docker. Owns changes from architecture through testing, deployment, and operational verification.

EXPERIENCE

AlephRI

Sep 2021-present

Backend Engineer / Mexico City / Hybrid

- Build and operate concurrent Elixir/OTP ingestion paths for GPS and telemetry arriving through provider pollers, Kafka, and push APIs.
- Design tenant-safe O(1) asset resolution with ETS composite keys, serialized mutation, and generation-sequenced cache publication.
- Implement fail-fast validation for duplicates, coordinates, rate, timestamps, and impossible movement before downstream side effects.
- Deliver provider integrations and REST/OpenAPI services; test and deploy Docker releases through GitHub Actions and AWS.
- Verify behavior with raw APIs, SQL, Redis, telemetry, and runtime logs, not only dashboards.

GGTech LATAM

Nov 2020-Sep 2021

Full-Stack Developer / Mexico City

- Developed and maintained a real-time broadcast-graphics platform for esports production workflows across frontend and backend surfaces.

SELECTED WORK

Embedded Rust airsoft system

no_std ESP32 firmware with Embassy async tasks, actor-style concurrency, Wi-Fi/AP networking, TCP/UDP, HTTP, BLE/GATT, NFC, and display/peripheral tasks.

Broadcast graphics UI

Operator dashboards and live graphics built with React, TypeScript, NodeCG, asynchronous data fetching, and replicated event state.

Nia

Tauri desktop application using React, TypeScript, SQLite, schema validation, voice APIs, and web research.