# Caio Wilson

**Principal Software Engineer — Geospatial Web SaaS (React, Mapbox/3D)**
Remote (LATAM) · English (C2, fluent)
me@caiowilson.dev · +55 21 99100-5152 · linkedin.caiowilson.dev

## Summary

Principal engineer (17+ years) defining technical strategy and architecture for customer-facing SaaS at scale.
Specialized in geospatial data visualization and real-time map experiences using Mapbox (including 3D) and Leaflet—turning complex location data into fast, intuitive product surfaces.
Expert in modern frontend architecture (production-ready React & Vue, TypeScript) and resilient backend/API systems (Node.js, Python, PHP), with a track record of modernizing platforms and improving performance, reliability, and delivery velocity.

## Core Skills

- **Geospatial & Real-time:** Mapbox/3D, Leaflet, real-time map visualization, layers/overlays, high-frequency update handling, interaction/performance tuning
- **Product Web:** React, Vue.js, TypeScript, SPA architecture, API-driven UX, UI performance
- **Architecture & Strategy:** system design, distributed architecture, microservices, event-driven systems, legacy modernization, service contracts
- **Backend & APIs:** Node.js, Python (FastAPI), PHP (Laravel/Symfony), REST, service-oriented architecture
- **Cloud & DevOps:** AWS, GCP, Docker, Kubernetes, CI/CD, production operations
- **Data & Caching:** PostgreSQL, MySQL, MongoDB, Redis; pipelines & real-time data flows
- **Delivery & Leadership:** Agile/Scrum, code reviews, mentoring, cross-functional collaboration (product/design), quality standards

## Relevant Experience

### Software Developer — PROOCEANO | Mar 2020 – Mar 2023

- Architected and operated latency-sensitive data-processing services in Python and Node.js for data-heavy workflows, ensuring correctness and production stability.
- Owned key technical direction for the Brazilian Navy's official Search & Rescue geospatial system—drove architecture decisions (ADRs) and led delivery from design through V1 production rollout, including deployment to air-gapped Navy servers; system remains in active use.
- Built customer-facing, Google Maps–like geospatial dashboards for operational decision-making: interactive layers/overlays, filtering, and real-time map state updates.
- Engineered map rendering and visualization across Mapbox (incl. 3D) and Leaflet, focusing on smooth interactions under high-frequency updates and complex layer composition.
- Improved end-to-end geospatial UX by tuning API payloads, caching strategies, and client rendering to keep core map interactions responsive.

- Developed reusable geospatial primitives (layer orchestration, filtering, clustering/aggregation patterns, live state sync) that accelerated feature delivery across React and Vue product surfaces.
- Partnered with non-technical stakeholders to turn ambiguous needs into shippable geospatial capabilities while balancing delivery speed with maintainability and reliability.

## Other Professional Experience

### Senior Software Engineer — CEPNet | Feb 2025 – Present

- Defined a modernization strategy to bridge legacy systems (COBOL + Oracle/DB2) with modern cloud-ready service surfaces, unlocking critical data for new product capabilities.
- Architected and maintained secure Node.js API services that exposed legacy functionality through service-oriented contracts, enabling faster iteration without destabilizing core systems.
- Improved reliability and change safety by strengthening automated testing, CI quality gates, and architectural review practices to reduce regressions.

### Senior Software Engineer — Xgrow Learning | Sep 2023 – Oct 2024

- Architected the backend evolution of a high-traffic SaaS platform on AWS (Laravel/Symfony), shaping scalable service boundaries, data access patterns, and operational practices for sustained growth.
- Led modernization initiatives to improve runtime performance and deployment safety, reducing operational risk through stronger release discipline, observability, and test coverage.
- Accelerated team velocity by unblocking full-stack delivery: reviewing frontend PRs, pairing on implementations, and coaching engineers to ship higher-quality product changes faster.

### Senior Back-End Developer / Architect (Contract) — Cactus Gaming | Jun 2024 – Aug 2024

- Acted as a "fixer" on a failing monolith: led rapid diagnosis, prioritized high-impact remediation, and drove changes that improved operational stability.
- Implemented CI/CD and production safeguards (automation, deployment consistency, rollback/readiness practices) on GCP + Kubernetes to stop regressions and stabilize releases.
- Executed architectural cleanup by refactoring into clearer modules and interfaces, enabling safer parallel development and setting a foundation for future scaling initiatives.

### Senior Software Engineer — inklo | May 2023 – Jul 2023

- Led full-stack development of a medical finance platform using Laravel + Vue.js, delivering a secure MVP with strong data integrity and backend design.

## Languages

- Portuguese (Native)
- English (C2, fluent)