# Fernando Henrique Caversan Santos Duro

**Senior full-stack engineer · Former co-founder and CTO**
Bauru, Brazil (UTC−3) · me@fernandoduro.com.br · fernandoduro.com.br · LinkedIn · GitHub

Full-stack engineer with 15 years building web and mobile products, from data collection and back-end services to the interfaces people use every day. Works across TypeScript, React and Node.js, PHP and Laravel, Vue, Go, MySQL and Postgres. Nearly a decade as co-founder and CTO of software businesses in Brazil: scoped work directly with clients, owned architecture and led up to five concurrent client projects. Most recently a senior developer on a Laravel and Vue email marketing and automation platform, in a remote team across time zones. Mentors developers through code review.

## Experience

### Independent projects · Oct 2026–present

After leaving Awesome Motive. Personal projects, built and run alone; private unless linked.

- Built and runs fernandoduro.com.br: a custom WordPress block theme with its own plugins, a Docker Compose stack (nginx, PHP-FPM, MariaDB) used as local staging, and production on AWS (EC2 Graviton) defined in CloudFormation; deploys through GitHub Actions with OIDC into an IAM role and SSM Run Command (no SSH), secrets in SSM Parameter Store, Cloudflare in front with origin certificates and Zero Trust Access on the admin.
- Built numberstuff, a WordPress plugin that loads Google Tag Manager only after consent (Consent Mode v2, honours Global Privacy Control), pushes growth events (leads, downloads, outbound clicks, language switches) to the dataLayer, counts consent choices anonymously without cookies or IPs, and keeps the GTM container and GA4 key events as code applied through the Tag Manager API; tested with PHPUnit and Playwright, CI on GitHub Actions.
- Built a multi-agent AI work environment (Claude Code and Codex): one agent per kind of work, each with a written scope, file-based state and messages between agents, plus a planning agent that routes tasks; two MCP servers in Python (Gmail triage and Google Calendar) with restricted permissions and tests; hooks that pull related notes from a knowledge base on every prompt, and safety hooks that block risky actions, with tests.
- Built Bingo Fuel (public), a Go desktop widget for KDE Plasma that shows how much of each AI subscription limit and prepaid credit is used before starting a task.
- Built project-appraisal, a Go CLI and local web page that groups AI coding sessions into pieces of work and totals token spend per group.
- Built Talaria, a Python video pipeline that turns a videocast episode into vertical clips, quote posts, a thumbnail and publishing texts, then publishes them through the platforms' APIs on a schedule (ffmpeg).
- Built a CV toolchain that renders Markdown résumés to Word and PDF.
- Built a local personal-finance dashboard in Python that parses bank and card statements (CSV and PDF, including encrypted PDFs) and estimates a typical month.
- Built a Cursor extension (public, May 2026) that pastes Windows clipboard images into Claude Code running in WSL.

### Awesome Motive · Senior Developer (remote) · Sep 2025–Oct 2026

Lindris, the company's internal email marketing and automation platform, used by its brands for their campaigns, including Black Friday and Cyber Monday. Laravel 12 / PHP 8.2, Vue 3, Livewire, Tailwind, Vite, RabbitMQ, alongside an older PHP service with Redis and ClickHouse.

- Built full-stack features on Lindris, with heavy use of RabbitMQ queues, alongside an older PHP service with Redis and ClickHouse; the platform carried the company's brands' campaigns through Black Friday and Cyber Monday.
- Owned the reliability of core automation features: found root causes in production and shipped tested fixes.
- Diagnosed delivery and performance issues end to end, wrote the findings up for the remote team's weekly planning so priorities were set on data, shipped tested fixes (PHPUnit, Playwright) and set up Grafana alerting.
- When a customer lost a quick way to check campaign links before Black Friday, designed and built a full-size campaign preview with working links, one click from each campaign row and usable by keyboard and touch, while keeping the small previews view-only for security.
- Diagnosed a database deadlock storm in a high-volume upsert path down to a single column rewritten on conflict, and planned the fix with an induced-deadlock reproduction and red/green tests.
- Traced stuck queue consumers and silent message loss to their causes, including proving a proposed health check could not work by reading the client library, then reproducing the failure live and rescoping the fix.

- Fixed lost analytics events on the ClickHouse insert path (escaping and a retry ladder) across two pull requests, and rewrote campaign-statistics ClickHouse queries through a long review to approval.
- Planned and rehearsed at full size a copy-and-swap cleanup of a table bloated with tens of millions of junk rows, with a runbook and a merge gated on the rehearsal's evidence.
- Verified a security finding from code review against a live environment, fixed it with a guard and a test, and traced the same pattern across the codebase so it could be fixed centrally.
- Helped the team make AI-assisted development part of daily engineering (agent orchestration, parallel code review, automated task triage); authored skills that assess review findings and turn long PR reviews into short decision guides, and a workflow that reviews a batch of teammates' PRs in parallel.
- Built an end-to-end browser test that runs a front-end pull request against a back-end pull request: two-factor admin login, safe fixtures, a real delivered send, screenshots and teardown.
- Built a test harness comparing a legacy query builder with its replacement, with personal data redacted.
- Handled escalations from support and onboarding, from customer report to shipped fix.
- Built developer tooling shared with the team: a contribution tracker for quarterly self-review that publishes Markdown to Google Docs through the API (own OAuth client), and a script that summarizes the state and history of GitHub issues to prepare review meetings.
- Worked on A/B campaign testing: sending competing campaign variants and comparing their performance to pick the best.

**Hiperlink · Co-Founder & CTO · Jul 2023–Sep 2025**

A technology team for companies without one: developers, process and technical direction to build their products. The continuation of Cocreare and Newtab Academy. Fernando owned delivery and technical direction; a partner led sales.

- Led up to five concurrent client projects across many industries (10+ delivered in two years), owning each from scoping to production and on call for production.
- Staffed each team from a network of 100+ developers by project phase, skill and fit, with a named backup for every role: designers rotated between projects by phase, and specialists (for example in a client's payment gateway) joined for one feature and left.
- Acted as technical lead in client conversations across 15+ channels, beside the partner who led sales: scoped integrations and requirements, answered technical questions, and agreed a workable next step with clients and engineers when requirements were incomplete, so what was sold was what was built.
- Worked hands-on in the client teams that built data platforms: Python/Django APIs and admin panels for two nationwide data platforms on Postgres and SQL Server.
- Built a field-monitoring system with Go running on the hardware on site, reporting to a Django admin with Grafana dashboards.
- Worked hands-on in React/TypeScript and PHP client teams, including a checkout service with a payment-gateway integration and two CRM features (guiding a developer on that team), and a Laravel app with postal-code address lookup.
- Built serverless functions on AWS Lambda in Go for a client product.
- Built the GA4 integration and queries behind most of a data analytics client's growth dashboards for the websites it managed (from Cocreare through Hiperlink).
- Built an app that showed users nearby stores offering discounts, using Postgres distance queries over coordinates (from Cocreare through Hiperlink).
- Led a three-person team that delivered client workflow automations with n8n, choosing an existing tool over a custom build; the client praised the result.
- Set up weekly planning, code review, testing and delivery practices adapted to each team's developers, and carried what worked from one team to the next.
- Made assumptions explicit in meetings, pull requests and messages before delivery, under a team rule that "the obvious needs to be said".
- Handled performance concerns by finding the cause first and moving developers to a better-fitting project; let people go when that failed or when work was misreported.
- Wrote several web scrapers in Go.
- Used GitLab with two or three clients, and Google Cloud for app integrations, Secret Manager and hosted scripts for one client.

**Cocreare · Co-Founder & CTO · Jan 2019–Jul 2023**

A software house in Bauru, spun off from Digital Labs' services branch, that built development teams for companies, including developers trained at Newtab Academy. Became Hiperlink in 2023.

- Owned architecture and technical direction for 10+ client web and mobile apps taken live (stack, repository and development approach, data model, services, integrations, automations, payment flows; React and Redux front ends on several), staying involved from first design through delivery.
- Built and published 5+ mobile apps for different companies in Ionic, Flutter and React Native (from Digital Labs

through Hiperlink), with Node.js APIs and admin panels behind them, and handled every App Store and Google Play submission himself; features across them included payments, maps and geolocation, push notifications and realtime chat.
- Built a financial-analysis product for a client (started at Digital Labs, continued at Cocreare through 2019): Go crawlers that collected Brazilian listed companies' financial statements (balance sheet, cash flow, income) from a public market-data site and daily exchange rates from the central bank, a Slim 3 PHP API with JWT authentication and subscription plans, and reports comparing each company with its sector and industry; the MySQL database grew past 1 GB, hosted on AWS EC2.
- The only engineer among the three partners: managed the company's developers (two employed developers and an intern over time, up to two at once) in a team of about nine at peak, alongside sales, marketing and a psychologist shared with Newtab Academy.
- Led the development team as tech lead on many client projects, beyond the ones he coded himself.
- Built small Node.js/Express services beside the main back ends when a front end needed a live-updating service or cache, and TypeScript front ends in Angular and React; chose Go over Node for always-on processes.
- Assembled development teams for client products, including developers trained at Newtab Academy, and adapted practices such as documentation and testing to each developer.
- Across all four co-founded companies, set up GA4 and gtag event tracking and the Meta and LinkedIn pages, and published and monitored the campaigns and tests the marketing partners planned.
- Contributed to prospecting through LinkedIn outreach and web research, and explored tools and automations to find new work; shared the partners' work of keeping a software house financially sustainable.

**Newtab Academy · Co-Founder, CTO & Facilitator · Mar 2020–Jul 2023**

A programming school that trained career changers for the market; students paid only after landing a qualifying job. Graduates could join client teams through Cocreare. Became part of Hiperlink in 2023.

- Designed and taught a project-based program for career changers: four cohorts of about 15 students over six months each, covering programming fundamentals, back end, and React with Redux; recorded 50+ hours of course material, with lessons in every back-end and front-end module.
- Coached graduates into their first developer roles, including one through two early placements: worked through his assigned tasks and set weekly goals; the second employer chose to retain him in month two.
- Built and ran all of the school's technology: the website, the WordPress learning platform holding the course materials, the student recruiting flow and its integrations, later with a second developer who went on to Hiperlink.
- Fed graduates into client teams at Cocreare.

**Digital Labs · Co-Founder (startup studio) · Jan 2016–Jan 2019**

- Co-led technology and product, with one or two other leads, for three studio ventures taken from concept to launch: Salus (healthcare plan alternative), Protarefa (task and process manager) and Quickimovel (property marketplace). Salus and Protarefa ran for years.
- Developed each venture hands-on alongside the studio's developers, until each was spun off: contributed to Salus's Go API, Ionic app, admin and web app (an API serving separate doctor and patient interfaces), and built its public website himself.
- Chose and standardized the studio's stack so every new venture started from the same base: Ionic mobile apps, Angular front ends, Slim 3 PHP APIs over MySQL (Go APIs where a product needed them, as in Salus, Protarefa and Randtalk), each product run as its own Docker Compose environment; picked because they were current and quick for the team to learn.
- Built a shared Go library reused across the studio's products: WebSockets, caching, a priority queue, validation, repositories and OneSignal push notifications.
- Led development of Randtalk's mobile app (Ionic with Angular and TypeScript, Firebase, Android and iOS) as its main contributor, and contributed to its Go API (friends, invitations, achievements), 2015–2017.
- For the studio's services clients: took over and extended a client's Symfony 3 platform (Doctrine, Sonata Admin, bank-slip and bank-remittance file generation, Excel exports), adding chat management, location filters, reports and multi-file upload (2017).
- Built a Go crawler service as its main author that automated price quotes and orders on a supplier's ordering site for a client (2017).
- Built, as main author, a search service for a client: a PHP API over Elasticsearch with phonetic matching of Portuguese names and cities and higher scores for exact matches, plus its admin and web front end (2017).
- Co-built a client's platform as its second-largest contributor: a Slim PHP API (Eloquent, Facebook Graph integration, Excel import and export) and its admin panel (2017–2018).
- Built an Angular admin panel for a local events guide (2017), as its main author.
- Worked inside a client's own engineering team on its AngularJS operations front end (2017).

- Built and maintained the studio's shared development environment as its top contributor: one Docker Compose environment per product, install, build and run scripts (2016–2017).
- Co-led, with one partner, the studio's software-house services for outside clients, which brought in most of the studio's income and funded the ventures, in a studio of about seven partners.
- Spun the services branch off as Cocreare in 2019 and let the ventures run on their own, after the partners agreed that services funding every venture was no longer sustainable.
- Built realtime chat over WebSockets in Node.js for the property marketplace's mobile app.
- Split narrowly specific jobs (crawlers, scripts) into small standalone services consumed by the main application so they could be reused across projects, a design habit kept through every later role.
- Built data visualizations with Highcharts, pushing the library beyond its intended chart types, and stored each chart's configuration as reusable JSON so charts could be dropped into other projects.
- Also built ventures that never launched.

### Livebuzz Tecnologia, then Dinamize · Developer · Feb 2011–Jan 2016

Livebuzz, a social media management platform: a Laravel web application over Go services. Dinamize acquired it in 2011.

- Joined Livebuzz as its first developer, working with the two founders, and built most of the platform's first features, including its integrations with the social networks; the team later grew to five.
- Built the platform back end to front end and data model, with the backend in Go from 2012: cross-network post and metric collection, sentiment and tag analysis, metrics dashboards, A/B testing, scheduled publishing and campaigns, brand monitoring; the platform served ~1,000 client accounts over five years.
- Connected every social network that offered it over OAuth 1.0 and 2.0, writing the flows largely by hand in Go since few libraries existed then, and collected each network in parallel within its API rate limits.
- Kept pages loading in under a second over MySQL tables of 20M+ rows, using asynchronous loading, caching and an early move to Elasticsearch.
- Worked across every part of the platform as part of the team: a collector covering ~16 social networks, OAuth publishing and metrics for connected accounts, a link shortener with click analytics, profile enrichment (inferred gender and location), a support chat widget, and a company-wide accounts and billing service shared with Dinamize's email marketing product.
- Outside work, co-built Quickimovel, a property marketplace, in PHP (Kohana) from 2013 as its top contributor, later one of Digital Labs' ventures.
- Stayed on after the acquisition: relocated to Porto Alegre to keep building the platform inside Dinamize (2012–2013), then developed it remotely from Bauru with a growing team until 2016.

### Early career · before 2011

- Two developer internships converting Delphi desktop programs to PHP web applications, working in PHP since PHP 4.
- English teacher on the side, paid per class.

## Skills

**Languages:** Go (2012–2016, Digital Labs crawlers 2016–2019, 2023–2025, 2026; preferred for fast, parallel work), PHP 4–8 (since the internships), JavaScript, TypeScript (with Angular and React, Cocreare onward), Python (Django APIs and admin 2023–2025; tooling 2026), SQL
**Back end:** Laravel, Livewire, Symfony 3 (Doctrine, Sonata Admin), Slim 3, Kohana, Django, Node.js and Express (realtime chat over WebSockets from 2016, small live-updating services and caches), REST API design, OAuth 1.0 and 2.0 client flows (written by hand), payment-gateway integrations, third-party platform APIs, queues and workers (RabbitMQ, AWS SQS), web scraping (often in Go), n8n automations
**Front end:** React, Redux, Next.js, Vue 3, Angular (2 onward, with Ionic, from 2016), AngularJS, Alpine.js, Blade, Tailwind, Vite, accessible and responsive UI, data visualization (Highcharts)
**Mobile:** Ionic and Cordova (from 2015), Flutter, React Native, Firebase, OneSignal push; App Store and Google Play publishing
**Search:** Elasticsearch (Livebuzz 2011–2016; phonetic and scored matching, 2017)
**Data:** MySQL (2011 onward; schema design, slow-query and deadlock diagnosis), PostgreSQL (including geolocation queries), SQL Server, Redis, ClickHouse, Elasticsearch, MariaDB
**Cloud and ops:** AWS (EC2, Lambda in Go, SQS, CloudFormation, IAM, SSM), Google Cloud (app integrations, Secret Manager, hosted scripts), Cloudflare (DNS, Access), Docker and Docker Compose (since 2016, one environment per product), GitHub Actions (OIDC deploys), CI/CD, GitLab, Grafana dashboards and alerting, Sentry, on call for production
**Testing:** PHPUnit, Playwright, end-to-end browser tests across repositories, comparison harnesses
**Product and analytics:** GA4 integration and queries, GTM and Consent Mode v2, event tracking, metrics dashboards,

A/B testing of campaigns, scheduled publishing and campaigns, checkout and payment flows
**AI:** Claude Code and Codex daily, agent orchestration, MCP servers, tool calling, context retrieval for agents, AI-assisted code review
**Ways of working:** small single-purpose services wrapped for reuse by larger apps, client-facing scoping, end-to-end ownership, code review and mentoring, teaching, remote async planning in issues and PRs, hiring and staffing

## Education

**UNESP — Universidade Estadual Paulista, Bauru:** Information Systems coursework (three years, not completed), 2011–2016.
**CTI–UNESP (Colégio Técnico Industrial Prof. Isaac Portal Roldán), Bauru:** Technical diploma in computing, 2007–2009.

## Languages

Portuguese (native), English (professional working proficiency).