Henrique Vicente de Oliveira Pinto

Software Engineer | Go, PostgreSQL, Kubernetes, Cloud Computing, AI
The Hague, Netherlands · henriquevicente@gmail.com

Website: https://henvic.dev
GitHub: https://github.com/henvic
LinkedIn: https://linkedin.com/in/henvic

Summary: Software engineer working with Go since 2015 and with web services since 2009. Most recently at bol.com, modernizing the architecture of the Go service that handles all traffic ingress (peaks over 15k req/s), among other work. Earlier, payment processing at Form3, and at PVH an infrastructure modernization and database migration that cut recurring costs by over 90%. Contributor to the Go standard library (`signal.NotifyContext`) and maintainer of open-source libraries and programs.

Skills

Core: Go (#golang), PostgreSQL, Kubernetes, Docker, Google Cloud (GCP), AWS, Pulumi, gRPC, GraphQL, Prometheus, OpenTelemetry, Elasticsearch, Redis, TypeScript.

AI/LLM: RAG over PostgreSQL (pgvector, AlloyDB ScaNN), Gemini via Vertex AI, Vercel AI SDK, agent tooling, LLM metrics; AI-assisted development.

Experience

Go Engineer (contractor) Feb 2025 – Oct 2026
bol.com *Utrecht, The Netherlands*

bol.com is the largest online retailer in the Netherlands and Belgium. Brought in for Go expertise to modernize the company's first Go application, then joined the Core Backend team to promote Go knowledge and raise the quality of its main application, the ingress router.

Core Backend team (Jan – Oct 2026): the Go ingress service for all of bol.com's traffic (web, app, and AI streaming), with peaks over 15k req/s. It sits behind Akamai and Google Cloud Armor and fans out requests through the GraphQL router to its internal services.

- Implemented bot protection against the scalping of high-demand products using consumer trustworthiness signals.
- Reduced CPU usage, memory allocations, and network overhead through profiling with pprof and AI-assisted analysis.
- Worked on acceptance and integration tests, metrics, request header enrichment, JWT authentication, rate limiting, and Content Security Policy; reviewed bol.com's implementation of the Token-Agnostic Identity (Passport) pattern for performance gains.
- Evaluated GraphQL federation routers, WunderGraph Cosmo (Go) and Hive Router (Rust), in terms of effort to extend them with plugins and sidecars and how their built-in protections compare.
- Discovered and documented previously technical details that had never been written down.
- Raised the team's Go practices through pair programming and code reviews, and wrote runbooks, ADRs, and technical documentation.

Supplier & Financial Conditions team (Feb – Dec 2025): modernized bol.com's first Go application, the service managing supplier commissions and agreements such as rebates, allowances, and promotions (REST APIs, Pub/Sub consumers, cronjobs, BigQuery pipelines).

- Cut direct dependencies from 45 to 25 and deleted over 100k lines of code, keeping every feature and raising test coverage; fixed data races and other latent bugs, and added CI checks to prevent regressions and improve resilience.
- Introduced RFC 7807-structured errors across all endpoints, tracing, Prometheus metrics, Kubernetes CronJobs in place of in-app scheduling, integration tests against real ephemeral PostgreSQL databases, and a consolidated GitLab CI pipeline.
- Added AI-assisted commands to keep OpenAPI documentation and test code up to date.
- Presented the work as *Drying Up the Architecture of a Go Application* at bol × ING Tech Talks.

Founding Engineer Aug 2025 – Present
Docana *Remote*

Docana builds enterprise AI agents, workflows, and chat assistants that integrate with a company's documents and systems and keep an audit trail. Built in TypeScript (Next.js, Node.js).

- Scaled the production PostgreSQL database for growth: zero-downtime major-version upgrades and the migration from Cloud SQL to AlloyDB, provisioned with Pulumi.
- Cut the p95 latency of RAG knowledge search by over 50x, moving vector indexes from HNSW to ScaNN on AlloyDB and fixing bottlenecks found through query plans and production telemetry.
- Built the Prometheus and Grafana observability stack from scratch, including LLM token, cost, and latency metrics per customer, with alerting that has caught incidents before customers even had a chance to notice.
- Security: Cloudflare Access (Zero Trust) and Google Cloud IAM for its services; CSP violation reporting.
- CI: overhauled the integration tests, fixed flaky and expensive LLM tests and gated them behind cheaper checks, and made linting and type checking up to 15x faster, bringing a CI bill that was on track to grow tenfold back under control.
- Built product features such as agents that browse websites using headless browsers to extract data and act on the user's behalf, and dashboards of customer usage and limits that keep AI costs under control; kick-started the chat-assistant prototype.

Senior Software Engineer Nov 2023 – Dec 2024
Self-employed contractor *Remote*

- **FerretDB**, Nov 2023 – Apr 2024: worked on an open-source MongoDB-compatible database that uses PostgreSQL as its backend.
- **OCCRP** (investigative-journalism network), Sep 2024 – Dec 2024: worked on an application for indexing investigative-journalism documents.

Senior Software Engineer Aug 2022 – Apr 2023
Form3 *Remote (London)*

Cloud-native payment processing platform for the banking industry.

- Core Data team: built and maintained the internal services that process payments and payment returns, in Go with gRPC, NATS, PostgreSQL, Kubernetes, and Terraform across cloud providers.

Senior Software Engineer Feb 2021 – Jul 2022
Stitch, PVH Corp. *The Netherlands*

PVH's digital showroom used by the sales team of Tommy Hilfiger and Calvin Klein to present the garments of their seasonal collections to shops and business buyers.

- Led a comprehensive project to enhance the developer experience, ensure reliability, improve efficiency, and reduce operational costs by consolidating microservices (heavy on gRPC and GraphQL) and aligning them with business domains.

- Replaced a proprietary non-relational database with PostgreSQL and Elasticsearch/OpenSearch, shrinking recurring database and licensing costs by over 90% and accelerating development across multiple teams.
- Redesigned the testing infrastructure, cutting the integration test duration from minutes to about 2 seconds.
- Experience with Go, gRPC, GraphQL, Kubernetes, Terraform, and Amazon Web Services.

Senior Software Engineer Jun 2019 – Jan 2021
HousingAnywhere *Rotterdam, The Netherlands*

- Platform team: public REST APIs, internal services, and affiliate-partner integrations in Go on Google Cloud and Kubernetes.
- Payments team: worked on the Stripe payment integration and the payout infrastructure.
- Experience with Go, gRPC, Google Cloud Platform, Kubernetes, and microservices.

Senior Software Engineer Jan 2018 – May 2019
Software Engineer Mar 2014 – Dec 2017
Liferay, Inc. *Brazil*

- Led the development of the Go CLI for WeDeploy and Liferay DXP Cloud, the primary way developers accessed the platform. Under the hood: git as the deployment transport, SSH-like remote shell into containers over WebSocket (reverse-engineered the socket.io protocol for it), anonymized usage telemetry, and release pipelines for macOS, Linux, and Windows with automatic delta updates.
- Wrote the kubeapply microservice to overcome Kubernetes API limitations and helped plan the migration from Docker Swarm to Kubernetes.
- Worked on Liferay's open-source JavaScript GUI frameworks and libraries, such as AlloyUI.
- Core maintainer of NodeGH, an open-source GitHub CLI that predated GitHub's official tool.

Backend Engineer Oct 2012 – Jul 2013
MGR Tecnologia *Brazil*

- Cahier, a B2B corporate social network: built its real-time chat on socket.io and Node.js with a PHP backend; profiled and fixed SQL performance bottlenecks in legacy code.

Founder 2009 – 2011
Plifk (file sharing), Vehikel (marketplace for used vehicles), and more — see henvic.dev/portfolio

Open Source & Talks

Go standard library: proposed and implemented `signal.NotifyContext` (Go 1.16).
Maintainer: httpretty (HTTP request/response inspector for Go clients and servers), pgtools (PostgreSQL library to make working with pgx, tern, and scany much easier, in particular with its `sqltest`), pgq (PostgreSQL query builder), and pgxtutorial (reference Go service with PostgreSQL and gRPC).
Talks: *Integration Tests: Writing Good Automated Tests in Go*, lightning talk at GopherCon 2023, San Diego · *Drying Up the Architecture of a Go Application*, bol × ING Tech Talks, Amsterdam 2026 · *From Squirrel to pgq*, Go meetup Rotterdam 2024 · Go meetups Amsterdam 2022–2023. Full list at henvic.dev/talks.

Education

Bachelor of Science in Computer Science October 2013 – December 2017
Universidade Federal de Pernambuco

EMC Academic Associate 2017
Cloud Infrastructure and Services