

JOHN SILVERIO

Software Engineer

Python/Django, TypeScript/Angular, C#/.NET, PostgreSQL/PostGIS, Docker

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■ SUMMARY

Software engineer with about three years building systems end to end, deepest on the backend. Trained as an agricultural technician and worked on farms before writing software for agribusiness. Author of Hort, an open-source Rust sandbox for AI coding agents.

■ EXPERIENCE

Software Engineer

Vale Verde Ambiental, Remote, Brazil · **Feb 2025 – Present**

B2B consulting firm for agribusiness: land tenure regularization, environmental licensing and remote sensing. Team of four developers.

- Build and maintain the company's ERP-scale platform (Python, Django, DRF, GeoDjango, PostgreSQL with PostGIS): data modeling, new modules and REST APIs with an OpenAPI contract, query tuning, file storage on AWS S3 and integrations with external data sources.
- Take part in architecture decisions with the senior engineers (C4, PRD, UML, ADRs), and implemented in the platform's core trigger-based audit history, a transactional outbox on a Procrastinate queue, idempotency and optimistic locking on writes.
- Work spec-first and test-first (spec-driven development): each requirement gets an acceptance criterion that becomes a pytest test. Implement with AI agents (Claude Code, Codex) from those specifications and own the result: every diff is read in full, and nothing merges before it passes the CI gate.
- Built, as sole author, the desktop tool (Python, PyQt6, rasterio, geopandas) the analysts and the legal team use: it compares six satellite indices between two periods, cross-checks the property boundary against nine public datasets, among them CAR (the national rural land registry), and exports a PDF with a SHA-256 hash.
- Designed and built the company website and blog (valeverdeambiental.com.br): 25 pages, 15 of them landing pages, in Angular 21 with SSR, dynamic meta tags and JSON-LD for SEO, a headless CMS (Strapi) and a design system of 44 components, tested with Vitest and Playwright and deployed with Docker and nginx on a Linux VPS.
- Worked as one of four developers on a land analysis platform for rural credit, in production (C# 12, ASP.NET Core 8, Entity Framework Core on PostGIS, hexagonal architecture): built endpoints and CRUD, documented the API, removed N+1 queries and took on part of the Angular frontend work.

Stack: Python, Django, DRF, PostgreSQL, PostGIS, C#, .NET 8, ASP.NET Core, EF Core, Angular, TypeScript, Docker, AWS S3

Fullstack Developer

Valkeer, Remote, Brazil · **Feb 2024 – Feb 2025**

Web design agency. Frontend, backend and automation, for clients and for the agency's own operation.

- Automated client onboarding from signed contract to welcome email (CRM, n8n, ClickUp, Google Drive), with a Puppeteer script for the board's public link, which the ClickUp API does not expose.
- Built chatbots and AI agents for intake, scheduling and support (n8n, Python, LangChain), with RAG over the company's knowledge base: they handled 6 to 15 conversations a day and took manual triage off the team.
- Built and maintained client websites in HTML, CSS and JavaScript, most of the work, plus custom automations, a Node.js chatbot service, integrations between websites and ERPs, and the Docker infrastructure.

Stack: JavaScript, HTML, CSS, Node.js, Python, LangChain, RAG, n8n, Puppeteer, Docker

Back Office Analyst

Zhavia Tecnologia, Curitiba, Brazil · **Aug 2023 – Feb 2024**

Technical support and requirements analysis at a business management SaaS company: documentation, system testing and the bridge between support and developers, in Scrum and Kanban. Where turning a user's vague complaint into a clear requirement became a habit.

IT Support

Condor Super Center, Curitiba, Brazil · May 2023 – Aug 2023

Agricultural Technician

Fazenda União, Vilhena, Brazil · Sep 2021 – Feb 2023

Ran pesticide application on a 1,470-hectare farm, leading a crew of two, with GPS tablets for precision in the field. The foundation of the domain knowledge behind the agribusiness software built today.

PROJECTS

Hort

Open-source sandbox for AI coding agents · 2026 · github.com/johnsilverio/hort, johnsilverio.github.io/hort

A Rust CLI that gives each agent (Claude Code, Aider, Gemini CLI) a disposable container over a git worktree on its own branch, so it runs unrestricted and never touches the host. Daemonless and without Docker: the OCI runtime is embedded (libcontainer, user namespaces). Open source under AGPL-3.0, in alpha, installed from source, with a documentation site.

Mapsift

Collaborative GIS for environmental and land analysis, under construction · 2026 · github.com/johnsilverio/mapsift

Design for a GIS where several people edit the same map at once, offline included, and on geometry that carries legal weight the server keeps both versions of a conflict and a person decides. Built so far: the sync server in Django and PostGIS, with tests and CI, and a Rust core compiled to WebAssembly and wired into the Angular client.

Parlano

Discord bot that records a call and returns the meeting notes · 2026 · github.com/johnsilverio/parlano

TypeScript, with Node.js and discord.js. Records one audio stream per participant, which removes the speaker identification problem, transcribes and analyzes with Gemini 2.5 Flash and returns the notes in Markdown. MIT license.

SKILLS

Languages: Python, C#, TypeScript, JavaScript, SQL, Rust

Backend: Django, Django REST Framework (DRF), ASP.NET Core, Entity Framework Core (EF Core), Node.js, REST APIs, OpenAPI, background jobs and queues (Procrastinate)

Frontend: Angular, SSR, HTML, CSS

Data: PostgreSQL, PostGIS, GeoDjango, data modeling, remote sensing

Infrastructure: Docker, Linux, nginx, GitHub Actions, AWS S3, Git

AI and automation: Claude Code, Codex, OpenCode, spec-driven development (SDD), AI agents, n8n, LangChain, RAG

Testing and practices: automated testing (pytest, Vitest, Playwright), TDD, ADRs, requirements analysis, Scrum, Kanban

EDUCATION

Bachelor's degree in Information Systems

FIAP · since Jun 2024, in progress

Technical high school diploma in Agriculture and Livestock (Técnico em Agropecuária)

CEEP Assis Brasil, Clevelândia, Brazil · Jan 2018 – Dec 2020

LANGUAGES

Portuguese: native

English: upper intermediate (CEFR B2). Daily technical reading and writing. Wizard language school, 2016 to 2018.