



Loïc Lepinois

AI Engineer & Senior Tech Lead · Developer Coach

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AI Engineer and Senior Tech Lead in Brussels. I build LLM agents and RAG systems that run in production, today across two SaaS products, 5DAYS and Greentripper. Before AI, 10+ years of full-stack development and tech leadership (TypeScript, Node.js, React, Angular): shipping MVPs to scale-ups, leading legacy migrations, and setting up CI/CD that lets small teams move fast. Open to AI Engineer roles and senior technical positions.

CORE EXPERTISE

AI & LLM	RAG (pgvector, multi-source) · agent orchestration · tool calling · embedding lifecycle · Vercel AI SDK · Mistral · OpenAI · LangChain · prompt management & evals
Backend	Node.js · TypeScript · AdonisJS · PostgreSQL · TimescaleDB · OpenAPI · queue systems
Frontend	React · Next.js · Angular (2 to 17+) · Vite · Tailwind · shadcn/ui · NgRx
Infrastructure	CI/CD · Playwright · Cypress · Vitest · Jest · Docker · Digital Ocean · Keycloak
Leadership	Tech leadership · developer coaching · hiring & mentorship · engineering culture & conventions

EXPERIENCE

Independent Engineering Practice · Lepinois.dev

Jul 2021 – Present

Brussels · full-stack development, technical leadership and developer coaching for Brussels-based startups. Primary engagements (5DAYS, Greentripper, NSX, Skipr) detailed below.

- **Airscan** (air-quality monitoring SaaS): designed a data platform on PostgreSQL + TimescaleDB and AdonisJS, building independence from third-party data infra.
- **CoopHub** (cooperative-management SaaS): migrated from Meteor to Node + Angular; set foundations with versioned OpenAPI specs, a queue system, automated testing and CI/CD on Digital Ocean.
- **The Barn** (Brussels organic grocery chain): maintaining a Google Apps Script automation system for the operations team.

5DAYS · Liège

Jul 2023 – Present

AI-first SaaS that serves as a team's project memory: meetings, documents, tasks and notes are captured, structured and made queryable through a contextual AI agent.

Tech Lead

Jul 2024 – Present

- Led the AI layer as the product pivoted from "SaaS with AI features" to an AI-first agent platform.
- Built the project-level AI agent on a multi-source RAG architecture (pgvector), unifying meeting transcripts, project docs and internal resources under a single project context.
- Shipped the in-call meeting assistant: live summaries from real-time transcripts (AssemblyAI). Implemented tool calling so the agent acts inside the app (creating tasks, updating notes, retrieving documents).

- Engineered the embedding lifecycle (ingestion, re-indexing, deletion) and a provider-agnostic LLM orchestration layer on the Vercel AI SDK, running on Mistral for data sovereignty and swappable without rewriting the stack.
- Scoped the next phase: structured prompt management, golden-path datasets, chat monitoring and prompt-regression evals.

Developer Coach

Jul 2023 – Feb 2026

- Coached the lead full-stack engineer and team on architecture, code quality and long-term maintainability; drove code reviews and shaped internal engineering conventions.
- Set up end-to-end testing (Cypress) and unit testing (Vitest) in CI/CD; modernized the front-end stack (CRA → Vite, unified UI with shadcn/ui + Tailwind).
- Built internal guides and tooling around Claude Code; contributed hands-on to core features incl. a Google Docs-style collaborative notes editor (Yjs).

Stack: TypeScript · Node.js · React · Vercel AI SDK · Mistral · pgvector · AssemblyAI · LangChain

Greentripper · Brussels

Oct 2024 – Feb 2026

B2B/B2C climate-action SaaS for the travel industry: measuring, reducing and offsetting the carbon footprint of trips.

Tech Lead

Jul 2025 – Feb 2026

- Led the engineering side of Act4Travel, the new-generation platform replacing a legacy ASP.NET / MS SQL Server stack.
- Designed and shipped the platform's flagship AI feature (Act4Travel Scanner): users upload a PDF/Word brochure, an LLM pipeline extracts the trip's components (transport, accommodation, on-site, food) and feeds the carbon calculator, replacing a long manual data-entry process.
- Built the LLM layer on the Vercel AI SDK with OpenAI; integrated Stripe for carbon-contribution payments and laid the foundation for subscription billing.
- Owned CI/CD, deployment and end-to-end testing (Playwright); led the engineering team through hiring, mentorship and a performance-driven restructuring.

Developer Coach

Oct 2024 – Feb 2026

- Bootstrapped the technical foundation alongside a junior developer: defined the stack from scratch (Angular + PrimeNG + Tailwind, AdonisJS + PostgreSQL) and the MS SQL Server → PostgreSQL data-migration strategy.
- Coached across the full stack and took on increasing leadership, leading to the Tech Lead transition.

Stack: Angular · PrimeNG · Tailwind · AdonisJS · PostgreSQL · Vercel AI SDK · OpenAI · Stripe · Playwright

Front-end Developer · NSX, Normalized Systems

Jul 2023 – Oct 2024

Niel · University of Antwerp spin-off building "Expanders": code-generation tools producing highly evolvable software from application models.

- Built core front-end components of NSX's Angular Expander, extending the Java backend generator so full applications could be generated from the same model.
- Contributed to front-end architecture (conventions, design systems, tooling) and delivered hands-on work on two customer projects (Shipbid, Fidimco). Worked in a Dutch-speaking environment as a French native speaker.

Stack: Angular 17+ · TypeScript · design systems · Figma · Karma · Jest · Java · OpenAPI · Keycloak · Docker

Front-end Developer · Skipr

Jul 2021 – Jul 2022

Brussels · Belgian mobility-management company offering an all-in-one employee-transportation solution.

- Shipped new features on React and Next.js with a team of several developers; ensured reliability with Cypress and Jest.
- Owned front-end code quality (internally and with partner agencies) and worked closely with Product to deliver on schedule.

Front-end Teacher & Mentor · Onja

Jan 2020 – Apr 2021

Mahanoro, Madagascar · upskilling talented underprivileged youth to work in tech.

- Built a project-based curriculum from scratch (JavaScript → React, TypeScript, Redux) and taught 20 students in English, 6 days a week; kept the cohort progressing through the onset of COVID-19.

Full-stack Coach & Mentor · Passerelles Numériques

Feb 2019 – Jun 2019

Da Nang, Vietnam · IT training for underprivileged youth.

- Mentored 30 students through their final entrepreneurial projects (Scrum/Agile); ran workshops on Angular, React, React Native, Node.js and Figma.

Front-end Developer · Skwarel

Mar 2016 – Feb 2019

Brussels · B2B SaaS connecting accounting firms with their clients.

- Joined as 4th team member and owned the front-end architecture from day one; led the migration from Flash to Angular.js + TypeScript, then the accountant portal in Angular 2+.
- Designed and shipped a companion mobile app (NativeScript, App Store + Google Play); mentored juniors and onboarded interns over 3 years.

Full-stack Developer · Dour Festival

Feb 2013 – Jul 2013

Liège · European alternative music festival (~228,000 attendees/year).

- Built a platform for booking agents to manage programmed bands and a web + hardware solution to scan wristbands for access control of private areas.

EDUCATION

Certificate in UX Design & Research

Université libre de Bruxelles (ULB) · 2025

Master Computer Science (preparatory year)

Université catholique de Louvain (UCL) · 2013-2015

Bachelor Computer Science & Systems

EPHEC · Mobile-web frameworks · 2010-2013

LANGUAGES

French (native) · **English** (professional working) · **Dutch** (limited working)