

Backend Engineer – Python & AI Infrastructure

StartUp

Vast

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BEDRIJFSPROFIEL

Zeno is a legal AI startup building the next generation of intelligent software for legal professionals. The legal world runs on documents, context, and nuance — and we're building AI tools that deeply understand that. Our end-to-end platform combines advanced language models, retrieval systems, and document intelligence to support the full legal workflow: from research and drafting to bulk contract review.

We're not just building features — we're rethinking how legal knowledge work is done. Our clients include top-tier law firms (50+ FTE), and we've secured €2M in funding. Everything we build is hosted securely in Europe, fully ISO 27001 certified.

What makes us unique is our approach: no shallow AI integrations, but agentic systems designed for real-world performance and legal-grade reliability. Everything is built in-house by a small team of highly technical founders (backgrounds in AI, theoretical physics, infra), based in Rotterdam.

You'll join us at a pivotal moment. The foundation is there, the traction is real, and we're scaling. As engineer #5 or #6, you'll shape what Zeno becomes — in code, architecture, and culture.

WHAT YOU'LL DO:

Design and scale the backend infrastructure that powers AI-first legal workflows

What you'll do:

- Develop scalable APIs using FastAPI that support large-scale document processing
- Build and maintain services that integrate with LLMs, vector search, and complex data pipelines
- Ensure system reliability, security, and performance at scale
- Collaborate with the AI team to create fast, clean, and maintainable backend systems

WHAT WE'RE LOOKING FOR:

- 3+ years of backend development experience in Python
- Experience with FastAPI, PostgreSQL, and ideally GraphDB or vector search infrastructure
- You understand what it takes to build high-performance systems and scalable architecture
- You prefer clean structure, direct feedback, and solving real user problems

WHAT WE OFFER:

- A unique opportunity to work at a startup that is shaping the future of legal tech

- The ability to make a direct and tangible impact on the development and growth of our platform
- An inspiring place to work in an office located at the heart of Rotterdam
- Collaboration with a top-tier team of engineers, researchers, and entrepreneurs
- Competitive compensation, including growth and equity opportunities within the company

Recruitment process via Haystack People

Zeno works exclusively with Haystack People to fill these key roles. Haystack helps us connect with engineers who can build exceptional systems *and* thrive in a culture of autonomy, focus, and momentum. You'll be supported throughout the process — from first intro to final offer — by an experienced consultant who understands both the role and the team behind it.

Interested or have questions? Reach out directly to Desley Gontha via d.gontha@haystackpeople.nl or +31 6 28965652

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