

Hakan Ates

+39 320 025 5334 | hakan.a.tech@gmail.com | Avezzano, Italy
linkedin.com/in/ateshakan | github.com/ateshakan | ateshakan.com

SOFTWARE ENGINEER | PRODUCTION AI & FULL-STACK SYSTEMS

Software engineer with 3+ years building production AI systems. Main architect of the platform behind procedimentipa.gov.it, the Italian government's catalog of ~700 administrative procedures, drafted with AI and reviewed by ~20 legal experts. Raised a production extraction agent's LLM-as-judge score from **0.51 to 0.87** (0-1 scale, ~70% relative gain), and led a US startup to production launch with Stripe payments in *ten weeks*.

WORK EXPERIENCE

Go Project

Feb 2025 - Present

Software Engineer

Rome, Italy

- Italian digital company of 50+ people serving sports organizations, businesses, and public agencies. On the five-person procedure-catalog team, main architect of the backend and knowledge graph and primary author of the frontend, AI service, and search engine.
- Architected the five-service platform (FastAPI, LangGraph, React, PostgreSQL/pgvector, nginx) behind procedimentipa.gov.it, used by ~20 legal experts to maintain ~700 administrative procedures.
- Cut procedure research and drafting from days to hours with legislation-grounded AI workflows; replaced unreliable legal RAG with an expert-curated Normattiva/EUR-Lex legislative tree.
- Engineered the public search service solo, combining semantic, full-text, and trigram retrieval through Reciprocal Rank Fusion, with graceful fallback when embeddings fail.
- Automated legislative change tracking: a nightly system diffs tracked laws node by node, identifies changes down to a paragraph, maps them to affected procedures, and notifies subscribers.
- Created LMnetwork, a prompt optimizer using golden datasets and LLM-as-judge evaluation; lifted a production extraction agent's mean judge score from **0.51 to 0.87** (0-1 scale).
- Developed an internal CV search engine indexing ~1,000 candidate profiles with fully local OCR, LLM extraction, and hybrid Elasticsearch retrieval; personal data never leaves company infrastructure.

The Doppie Registry (US startup)

Mar 2026 - May 2026

Consulting Technical Lead

Remote

- Part-time technical lead for a two-engineer team; took over the product mid-build and led it to a production launch (reg.thedopple.com) with Stripe payments approximately ten weeks later.
- Stopped failed and canceled payments from silently corrupting campaign budgets by replacing balance snapshots with an append-only ledger of reservations, captures, releases, and refunds.
- Reduced recurring infrastructure, tooling, and email costs by approximately **\$2.5-3K per month** via local Docker development, on-demand agent documentation, and a SendGrid-to-Brevo migration.

Dishup

May 2024 - Nov 2024

Software Engineer

Avezzano, Italy

- Shipped a cross-platform Electron bridge and bilingual UI for Dishup's restaurant point-of-sale product, unifying EPSON, CUSTOM, and AXON fiscal printers behind one local API.

Breathment

Oct 2023 - Apr 2024

Backend & ML Engineer, Erasmus+ Intern

Munich, Germany

- Built the production asyncio and Socket.IO pipeline behind Breathment's CE-marked remote respiratory physiotherapy platform (TUM incubator): buffered live video in Redis, analyzed exercise windows with TensorFlow on a GPU server, and returned feedback to the patient app.
- Adapted MTTs-CAN for contactless heart- and breathing-rate estimation, stabilizing raw video with bandpass filtering, the Hilbert transform, and Welch's method before integration into the patient app.

Akamas

Jul 2023 - Sep 2023

Research Intern

Milan, Italy

- Selected via 3rd place in Moviri's performance-engineering competition at the University of Padua; researched gray-box and black-box optimization for application performance and cloud cost.

SELECTED PROJECTS

Each project name links to an in-depth write-up | more at ateshakan.com/projects

Scriba Harness Human-gated AI editing

Designed and prototyped an agentic editing system where each task runs in an isolated git worktree, every change is reviewed as a diff, and only an officer-approved merge can reach the record.

AiCorsi AI course platform

Delivered the AI layer solo in about two weeks: a six-stage LangGraph pipeline turning course PDFs into podcasts, quizzes, and grounded chat; a measured run produced a five-minute episode in *~4 minutes*.

md-italia Accessible government publishing

Authored the Markdown renderer and CodeMirror 6 editor that removed manual re-entry from procedure publishing; hundreds of real procedures now render as accessible portal-ready pages.

Rec4Dish MSc thesis and Dishup research

Trained a hybrid LightFM recommender on 3,055 real restaurant orders, reaching **Precision@5 of 31.8%** versus a 9.2% random baseline (3.5×) and 32.4% on a strict cold-start holdout.

EDUCATION

M.Sc. ICT for Internet and Multimedia Engineering University of Padua, Italy

2021 - 2024

Cybersystems track; thesis on hybrid restaurant recommendation systems.

B.Sc. Geoinformatics Engineering Hacettepe University, Ankara, Turkey

2016 - 2020

SKILLS

Languages: Python, TypeScript, JavaScript, SQL, Java

Artificial Intelligence & Machine Learning: LangGraph, LangChain, TensorFlow, PyTorch, RAG, embeddings, vector search (pgvector), LLM evaluation (golden datasets, LLM-as-judge), prompt optimization

Backend / Data: REST APIs, FastAPI, Flask, Django, NestJS, Node.js, PostgreSQL, Redis, Elasticsearch, Stripe, WebSockets, server-sent events

Frontend: React, Next.js, Angular, Ionic, HTMX

Infrastructure / Quality: Git, Docker, AWS S3, DigitalOcean, nginx, CI/CD (GitHub Actions, GitLab CI), Playwright, pytest

Spoken Languages: Turkish, English, Italian