Vasyl Yakovishak

Senior Software Engineer

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SUMMARY

Full-stack software engineer with 3+ years building production systems at Aspen Power Partners — AI agent platforms, document intelligence, ML forecasting, and internal SaaS. I build the platforms other teams build on, end to end: Python backends (FastAPI / PostgreSQL / AWS) and JavaScript/TypeScript frontends (SvelteKit, React), applying LLMs, RAG, and time-series ML in production. Consistently replaced third-party vendors with in-house systems, cutting recurring license and SaaS cost. 20+ personal projects across AI tooling, web, and 3D — portfolio at **vasyl.im**.

TECHNICAL SKILLS

Languages: Python, JavaScript / TypeScript

Backend: FastAPI, SQLAlchemy, REST & WebSocket APIs, PostgreSQL, Redis, Docker, CI/CD

Frontend: SvelteKit / Svelte 5, React / Next.js, Tailwind CSS, Three.js

AI / ML: LLM application development, RAG & GraphRAG, vector search (Weaviate, Qdrant), OpenAI, PyTorch, XGBoost time-series forecasting

Cloud & Integrations: AWS services (ECS/Fargate, RDS, S3, CDK), Azure services (Communication Services, Microsoft 365)

EXPERIENCE

Senior Software Engineer — Aspen Power Partners

May 2023 – Present

Lead engineer for the company's internal platforms (operations, AI agents, document intelligence, forecasting). Built each in-house rather than buying, removing recurring third-party cost.

- **AMOS — solar-fleet operations SaaS (flagship):** the daily system of record for the asset-operations team. Async FastAPI backend (80+ route modules) and SvelteKit 5 SPA with policy-based RBAC, real-time WebSocket updates, and stale-while-revalidate caching over dual PostgreSQL databases; covered by an automated end-to-end test suite.
- **AgentOS — governed multi-agent platform:** an in-house AI agent platform on AWS Fargate that lets staff safely delegate work to LLM agents. Built a human-in-the-loop governance layer that reviews every external action before it commits, 4-stack AWS CDK infrastructure, and persistent cross-agent memory — an alternative to buying commercial agent-ops products.
- **AIVA — document-intelligence assistant:** multi-tenant GraphRAG over enterprise PDFs/Excel with hybrid keyword + vector retrieval, reranking, and per-department isolation; a self-tuning retrieval loop improves answer quality from user feedback — replacing a paid document-Q&A tool.
- **Teams Voice Agent:** reverse-engineered Microsoft's Windows-only Teams media stack (Ghidra, Frida, Wireshark; reimplemented the MS-NMF/NBFS wire protocols) to run a meeting voice agent on Linux in-house — avoiding per-seat vendor licensing.
- **Solar forecasting & failure prediction:** in-house 16-day generation forecasting plus XGBoost inverter-failure warnings across 189 sites / 1,985 hardware units; +17% accuracy from per-site bias correction — reducing reliance on paid forecast feeds.
- **AspenServicesAPI & Microsoft 365 tooling:** consolidated engineering-data APIs, Teams bots, and Outlook add-ins behind one AWS service, including an NLP pipeline that turns raw meeting transcripts into structured, verified summaries.

Geek Squad Agent — Best Buy

2017 – 2023

- Built an internal Python client-tracking tool that cut tracking errors 15% and improved response times 13%; added automated reporting that raised team productivity 8%.

SELECTED PERSONAL PROJECTS

20+ shipped side projects (**vasyl.im** · github.com/vyakovishak) — multi-AI orchestration tools and MCP servers, Solana DEX analytics, interactive Three.js / 3D interfaces, and reverse-engineering toolkits.

EDUCATION

B.S., Computer Systems — Software Engineering, New York City College of Technology (CUNY) · 2023 · GPA 3.5