

Akshay Kankal

Engineering Lead | Enterprise AI Platforms | Industrial IoT

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SUMMARY

Engineer and engineering lead who has been writing software since 2015 and working full time since my 2020 degree. My first paid work was a website for the Washim District Police while I was still studying, and I have built across the whole stack ever since, from PHP and CodeIgniter to JavaScript, Node.js, React, C# and Python. For the last two and a half years I have focused on taking AI systems into production: an enterprise assistant used by about 20,000 employees across 76 locations in 25 countries, a Model Context Protocol server for regulated credit data, and an AI-SDLC harness used by about 50 developers. Alongside software, I have worked on energy monitoring since 2016 and co-founded an industrial IoT company, with two patent applications under examination. I enjoy sitting with the people who own a problem and building something they actually use.

EXPERIENCE

Engineering Lead

CreditRiskMonitor, NASDAQ listed (via Encore Infotech Services), Pune Jul 2026 to present

- Lead the India engineering team of 15 and own the architecture of the data platform behind the company finance and credit risk products, hands on in Python.
- Built an AI-SDLC harness on the Model Context Protocol that gives about 50 developers a controlled environment for AI assisted development, defining which tools, code and data an agent can reach.
- Designed and built the MCP server that exposes credit scores, payment scores and peer analysis to external AI clients as tool calls, from design to internal pilot.
- Built the controls around it: authentication on every request, entitlement checks against each customer contract, audit logging, per customer Redis cache isolation and per tool rate limits.

Technical Lead

Brose India Automotive Systems, Pune Apr 2024 to Jul 2026

- Led four engineers building the internal generative AI assistant for Brose, a tier one automotive supplier. Now used by about 20,000 employees across 76 locations in 25 countries, handling around 50,000 messages a day.
- Extended it from answering to acting: employees raise incidents, security incidents and support tickets through it and check their status.
- Worked directly with the Finance, HR, Controlling and Shopfloor teams to scope their needs, then delivered an assistant for each behind a central routing layer.
- Built retrieval augmented generation on Azure OpenAI, with access enforced at the retrieval step through existing Azure AD groups over OIDC.
- Built the React front end and backend APIs, integrated with the identity and document systems the company already ran.
- Built the evaluation framework that tests answer quality and access correctness, and made passing it a release gate for every deployment.

Senior Software Engineer

Brose India, Pune Feb 2023 to Apr 2024

- Member of the central IT engineering team, acting as an internal consultant to local IT teams across Brose sites worldwide.
- Built incident reporting tools and automation scripts for the security operations (SOC), endpoint security, Microsoft Exchange, ITIL service management and software packaging teams.
- Worked on site with the engineering teams in Bamberg, Coburg and Wuerzburg, Germany, in 2023.

Co-founder and Director

Varnilix Private Limited, Pune May 2025 to present

- Co-founded a DPIIT recognised industrial IoT company building V-GRID, distributed power factor correction hardware that helps factories use energy more efficiently.
- Also lead software products built at Varnilix, including a multi tenant workforce and payroll platform and a web based HR management system.

Associate, Education, Training and Assessment

Infosys, Pune Sep 2021 to Feb 2023

- Trained and mentored more than 500 engineers worldwide across multiple technologies, and wrote course material and assessments.
- Built the online assessment system used across the programme, and created proofs of concept for stakeholders in MERN, DevOps, blockchain, IoT and mobile development.

Co-founder, Director and IT Specialist

CodeElectra Technologies Private Limited, Washim 2017 to Aug 2021

- Co-founded a software company while at university. Our own product was a wireless electricity consumption monitoring and control system over IoT, funded by client delivery of web, mobile, IoT and machine learning projects.

- Started setting the company up in October 2016, before its incorporation in 2017. Incubated at the Savitribai Phule Pune University incubation centre in 2019.
- Mentored around 150 students in React, Next.js, Node.js, PHP CodeIgniter, Firebase and IoT.

CLIENT AND EARLY WORK

- Washim District Police, 2015: built the new website with the Cyber Cell of the Superintendent of Police office, recognised with a commendation letter from the Superintendent of Police in December 2015.
- NN Associates: built and maintained NNBid in PHP CodeIgniter, an online scrap auction platform whose clients included Whirlpool, Pune.
- Tata Motors, Pune, Jun 2019 to Mar 2020: final year industry project in the Digital Transformation and Change Management team, building a contract lifecycle management application in PHP CodeIgniter.

SELECTED PROJECTS

- MahaGAD AI Sahayak: bilingual retrieval based search and question answering over Maharashtra government resolution documents.
- Jan-Sunwai: WhatsApp to ticket grievance management platform for elected representatives.
- UWMS: multi tenant workforce management and payroll platform for contractor businesses.
- AskMax: multi tenant chatbot platform in ASP.NET Core and React with Azure AD group based permissions.
- www.akshaykankal.com: personal site with an interactive demo of permission aware retrieval.

PATENTS, PUBLICATIONS AND RECOGNITION

- Named inventor on two Indian patent applications, filed in February 2026 and under examination: 202621022494, distributed autonomous reactive power compensation, and 202621016587, a power factor correction apparatus with deterministic hardware safety interlocks and relay weld detection.
- Emergency Vehicle Navigator, an IoT idea, shortlisted by Intel Higher Education in a national selection in 2017 and advanced to the Intel Edison prototyping round.
- Student head for a national level hackathon with 1,800 participants on campus, leading 150 volunteers.

TECHNICAL SKILLS

How it grew: PHP from 2015, CodeIgniter to 2017, then HTML, AJAX and JavaScript, then Node.js and React, then C# and .NET from 2019, with Node.js, React and Python used continuously since 2019

Languages: Python, JavaScript, TypeScript, C#, PHP, SQL, HTML, CSS, Dart, PowerShell

Front end: React, Next.js, Tailwind CSS, AJAX, responsive web design

Back end: Node.js, Express, ASP.NET Core and .NET, Python REST APIs, PHP CodeIgniter

Mobile: Flutter

Data: PostgreSQL, MongoDB, Supabase, Cosmos DB, Redis, Firebase, relational and non relational databases

AI and ML: LLM integration in production, retrieval augmented generation, agentic workflows and tool calling, Model Context Protocol, evaluation frameworks, embeddings and vector search, Azure OpenAI, applied machine learning

DevOps and cloud: Docker, CI/CD, Git, Azure, AWS (EC2, S3, IAM), IIS, self hosted infrastructure, monitoring and structured logging

Security and identity: OIDC and Azure AD, role based access control, entitlement checks, audit logging, multi tenant isolation

IoT and hardware: industrial IoT, energy monitoring since 2016, power factor correction, embedded systems, home automation

Automation and low code: n8n, workflow automation, scripting, OutSystems, Neutrinos

Leadership: leading teams of up to 15, code review, mentoring, training more than 500 engineers, stakeholder discovery across 25 countries

CERTIFICATIONS

- Applying Machine Learning to your Data with Google Cloud Platform (Coursera)
- Introduction to Artificial Intelligence, Mathematics for Machine Learning, Statistics for Data Science, Data Science with Python, Programming with Python 3.x (Simplilearn)
- OutSystems Reactive Web Developer Certification. Neutrinos Developer Training.

EDUCATION

Bachelor of Engineering, Computer Engineering. G. H. Rasoni Institute of Engineering and Technology, Savitribai Phule Pune University. Graduated 2020, First Class, CGPA 7.47. Taught in English.

LANGUAGES AND WORK AUTHORISATION

English C1. German A1, currently learning. Marathi and Hindi native. Indian citizen, would need visa sponsorship to work outside India. Notice period 30 days.