Divya Sivamurugan

Pragmatic Engineer with 15 years of experience in building world-class products.

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 Github Profile | 🌐 My Website (divyas.dev) | 💼 LinkedIn - Profile

I am a highly innovative and pragmatic engineer with deep expertise in Azure AI and Generative AI. My skills include designing advanced agentic systems, optimizing agent behaviors, and seamlessly integrating intelligent, scalable solutions to transform enterprise operations. I am passionate about mentoring teams, fostering innovation, and bridging the gap between research and engineering to create resilient, AI-driven systems.

I am an accomplished engineering leader with 15 years of experience, specializing in the development of scalable enterprise applications. I have proven expertise in guiding cross-functional teams, overseeing the entire product development lifecycle, and delivering customer-centric solutions.

Leadership Highlights

Strategic Architecture & Vision

- Pioneered and architected the organization's first enterprise-grade Retrieval-Augmented Generation (RAG) platform, establishing a new architectural standard for intelligent document processing. This foundational system, built on FastAPI, ChromaDB, and Azure OpenAI, set the technical roadmap for future GenAI applications across the business.
- Defined the long-term technical strategy for the company's AI/ML infrastructure, creating technology roadmaps designed to support thousands of models and high-throughput, real-time inference, directly aligning with key business objectives.
- Acted as a key technical advisor to product and executive leadership, translating complex AI capabilities into tangible business value for C-level clients. Led technical deep-dives that were instrumental in accelerating sales cycles and driving strategic customer adoption.

Advanced MLOps & System Implementation

- Engineered and implemented a robust MLOps framework for the complete model lifecycle, incorporating sophisticated monitoring, automated code reviews using AI, and advanced observability to ensure high availability and performance for production systems.
- Championed a shift-left approach to quality by integrating AI-powered code analysis into the CI/CD pipeline, which improved engineering standards and led to a measurable 20% reduction in post-release defects.
- Designed for massive scale and reliability, ensuring solutions could handle enterprise-level demands for performance, security, and data privacy, drawing on deep expertise in distributed systems and cloud-native architecture.

Leadership, Mentorship & Influence

- Established a center of excellence for AI-assisted software development, driving the adoption of tools like GitHub Copilot and Cursor across a 20+ member engineering team. Standardized best practices and created knowledge-sharing programs that boosted team productivity by over 50%.
- Mentored and developed senior engineering talent, fostering a culture of technical excellence and continuous learning. Guided team members in tackling complex architectural challenges and promoted their growth into leadership roles.
- Managed project timelines and deliverables for complex, cross-functional initiatives. Championed Agile practices and maintained proactive stakeholder communication, improving team velocity, transparency, and on-time delivery of multi-quarter projects.

Professional Experience

Lead Product Engineer & AI Solutions Architect
Wolters Kluwer Elm Solutions, Chennai | Jan 2025 – Present

- Led the end-to-end design and development of GenAI applications using Python and Java, with a strong focus on **Retrieval-Augmented Generation (RAG)** and adaptive prompting strategies.
- Engineered robust prompt workflows including prompt chaining, dynamic tool calling using Model Context Protocol (MCP), and agent-based systems using **LangChain and LangGraph**.
- Developed semantic search capabilities using ChromaDB as a vector database and embedding models, enabling **context-aware retrieval** and enhancing relevance in AI-powered applications.

- Led the adoption of GenAI technologies (e.g., LLMs, RAG, agents) and integrated them into existing systems.
- Translated experimental outcomes into actionable system improvements; bridged research and engineering to bring data science to the application flow.
- Integrated AI capabilities into product and process workflows to enhance customer experience, streamline operations, and deliver intelligent, context-aware solutions.
- Implemented Pipeline using Azure DevOps, enabling consistent, version-controlled deployments across development, testing, and production environments.

Lead Software Engineer
Wolters Kluwer Elm Solutions, Chennai | Apr 2021 – Dec 2024

- Architected and deployed microservices across diverse Azure workloads including Azure Functions, Container Apps, and Azure Kubernetes Service, optimizing for resilience, cost-efficiency, and rapid iteration.
- Reduced manual document handling by 80% through automation. Ensured code quality and maintainability through regular SonarQube scans and remediation.
- Integrated Black Duck scans into the CI pipeline to proactively manage open-source vulnerabilities.
- Defined and enforced coding standards and best practices across the team. Built and maintained robust CI/CD pipelines using Azure DevOps for automated build, test, and deployment.
- Participated in architectural reviews and contributed to long-term technical strategy. Worked closely with product managers to translate business requirements into technical deliverables.
- Conducted quarterly performance check-ins to support team development and performance management.

Senior Software Engineer
Wolters Kluwer Elm Solutions, Chennai | Apr 2016 – Mar 2021

- Designed Spring Boot microservices.
- Improved performance by 30% via JVM, SQL, and Redis.
- Deployed Docker containers on Kubernetes using Azure DevOps and Bitbucket Pipelines for CI/CD.
- Secured APIs with OAuth2, JWT, and RBAC (OWASP compliant). Participated in architectural design, led code reviews, and mentored junior developers.

Software Engineer

Datacert Inc, Chennai | Apr 2014 – Mar 2016

- Developed reusable components for enterprise applications using **Java**, **RESTful APIs**, **JQuery**, and **Spring Framework**.
- Migrated a legacy .NET application to a Java-based architecture, improving maintainability, scalability, and integration with modern systems.
- Ensured complete unit test coverage for all implemented code to maintain high reliability and support continuous integration.
- Practiced Agile Scrum methodology with active participation in sprint ceremonies, daily stand-ups, refinements and collaborative team planning sessions.

Analyst - System Development
Verizon Data Services Pvt Ltd, Chennai | Oct 2010 – Mar 2013

- Developed a maintenance ticketing system using the Spring framework and RESTful web services for efficient issue tracking, assignment, and resolution.
- Collaborated closely with product managers to gather requirements.
- Mentored junior team members, offering guidance on technical best practices and reviewing their work.
- Assisted in developing a fault-tolerant system using Spring Web to support the monitoring and management of network faults and performance across multiple products.
- Contributed to unit and integration testing efforts using JUnit and Mockito.
- Boosted workflow efficiency by 10% through strategic refactoring and performance tuning, leveraging performance monitoring tools such as Glowroot and AppDynamics.

Technical Skills

- **AI/ML Architecture:** Agentic AI Systems, Distributed Systems Design, LLM Integration, RAG Patterns, Service-Oriented Architecture, LangChain, Semantic Kernel, AI Governance & Security
- **Cloud & MLOps Infrastructure:** Azure (Expert), Azure ML, Databricks, Vertex AI, SageMaker, GCP, AWS, Kubernetes, Docker, Terraform, CI/CD (GitHub Actions), Observability
- **Data Platforms:** Vector Databases (ChromaDB, Pinecone, Weaviate), Feature Stores, Data Orchestration, Real-Time Inference
- **Programming Languages:** Python, Java, Groovy.
- **Frameworks**: FastAPI, LangChain, Langgraph, Spring Boot, Streamlit, Hibernate,

Model Context Protocol (MCP).
- **Databases:** PostgreSQL, MongoDB, ChromaDB
- **Messaging & Integration:** Apache Kafka

Certifications

- Azure Kubernetes Service (AKS) – LinkedIn Learning, 2023
- SAFE Agile Fundamentals – LinkedIn Learning, 2022

Education

Bachelor of Engineering in Computer Science, Anna University, 2006 – 2010