

Bitan Sarkar

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PROFILE SUMMARY

Results-driven **Software Engineer** with **5 years** of experience designing and delivering production-grade, cloud-native backend systems using **Java, Spring Boot, Spring WebFlux, Python, and AWS**. Pioneer of **AI-Augmented Software Engineering** — leveraging **ChatGPT, Claude, and local LLMs (Ollama)** with advanced prompt engineering and agentic workflows to deliver **consistent 15x+ productivity gains**. Tasks that traditionally took 3 days now complete in hours; 2-week initiatives ship in a single day. Combines deep fundamentals in distributed systems, microservices, DevOps automation, and Generative AI integration to set a new benchmark for engineering output, code quality, and time-to-market. Proven track record of mentoring engineers, driving measurable business outcomes, and championing an AI-first engineering culture.

EXPERIENCE

Software Development Engineer I

June 2021 – Present

Publicis Sapient

Bengaluru, India

- **Omantel (Telecom Service Provider – Oman)**

- * Launched a custom **SAML adapter** bridging Omantel's LDAP with AWS Cognito, modernizing authentication and reducing WebSphere dependency by **70%**.
- * Boosted Backend-for-Frontend (BFF) performance by **3–5x** via AWS ElastiCache and DynamoDB migration, enabling faster page loads at scale.
- * Pioneered **AI-augmented development** using **ChatGPT, Claude, and local LLMs (Ollama)** with advanced prompt engineering — compressing multi-day tasks into hours and achieving **15x+ efficiency gains** across architecture, implementation, debugging, and code review cycles.
- * Delivered a centralized real-time **notification system**, increasing customer re-engagement by over **40%**.
- * Redesigned login with Google/Apple Sign-In, improving UX and reducing auth friction by **60%**.
- * Mentored **5+ engineers**, accelerating onboarding and improving team velocity by **25%**.

- **PTT t-ecosys (B2B Platform):**

- * Built scalable cloud infrastructure via **Terraform** (API Gateway, EKS), improving reliability and security posture.
- * Secured MongoDB access through private VPC endpoints, enhancing compliance and data safety.

- **Robinhood App (SCB, B2C SuperApp – Thailand):**

- * Built flight booking modules generating **3M+ THB** in campaign sales.
- * Designed **Spring Boot microservices with Kafka**, meeting sub-second SLAs under load.

AI-AUGMENTED ENGINEERING & DEVELOPER PRODUCTIVITY

Pioneering **AI-first engineering practices** that deliver measurable business impact through **Generative AI (GenAI), Large Language Models (LLMs), and agentic workflows**. Leverage **ChatGPT, Claude, and local LLMs (Ollama)** as force-multipliers across the full Software Development Life Cycle (SDLC), redefining what a single engineer can deliver.

- **AI-Powered Code Review Automation:** Architected and deployed an automated **Merge Request (MR) Review Bot** using **Ollama (open-source local LLM)** that reviews pull requests, flags code quality issues, and suggests improvements — eliminating review bottlenecks, accelerating release cycles, and maintaining **100% data privacy and compliance** at zero cloud-inference cost.
- **Accelerated Codebase Onboarding:** Use AI-assisted code comprehension to reduce time-to-productivity on unfamiliar legacy codebases from **weeks to hours**, enabling rapid contribution to cross-team and brownfield projects.
- **AI-Driven Debugging:** Resolve complex defects in unknown code **up to 10x faster** through LLM-powered root cause analysis — cutting Mean Time To Resolution (MTTR), reducing production incidents, and accelerating sprint delivery.
- **Advanced Prompt Engineering:** Apply chain-of-thought, few-shot learning, ReAct, and agentic-loop patterns to automate repetitive engineering tasks across architecture design, implementation, testing, documentation, and code review.
- **Productivity Transformation:** Consistently achieve **15x+ efficiency gains** — 3-day workflows compressed to hours, 2-week deliverables shipped in a single day — producing the cumulative output of **3–5 traditional engineers** while maintaining enterprise-grade quality.
- **AI Adoption Leadership:** Champion AI-augmented best practices across teams, train peers on effective LLM usage, and drive measurable improvements in organization-wide developer velocity and Developer Experience (DevEx).
- **Future-Ready Engineering:** Combine deep **Java / Spring Boot / AWS** fundamentals with cutting-edge AI leverage — delivering enterprise-grade quality at startup speed, exactly the multiplier modern product teams need.

SKILLS

Languages: Java, Python, C++, SQL, JavaScript, TypeScript, Bash

Frameworks: Spring Boot, Spring WebFlux, React, Node.js, Flask, FastAPI, Selenium

Cloud & DevOps: AWS (Lambda, Cognito, DynamoDB, EKS, EC2, S3, CloudFront, API Gateway, ElastiCache), Docker, Kubernetes, Terraform, ArgoCD, Jenkins, GitHub Actions, CI/CD

Databases: PostgreSQL, MySQL, Oracle, MongoDB, DynamoDB, Redis, Elasticsearch

Generative AI & LLMs: ChatGPT, Claude, OpenAI APIs, Anthropic APIs, Ollama (local LLM), LangChain, ChromaDB, RAG (Retrieval-Augmented Generation), Vector Databases, LLM Ops, Fine-Tuning

Prompt Engineering & Agentic AI: Chain-of-Thought, Few-Shot Learning, ReAct, Agentic Workflows, Multi-Agent Systems, MCP (Model Context Protocol), AI Code Review Automation, AI-Augmented Development

Architecture: Microservices, Event-Driven Architecture, Distributed Systems, REST APIs, GraphQL, gRPC, Kafka, Serverless

Soft Skills: Problem Solving, Technical Leadership, Mentoring, Stakeholder Communication, Agile/Scrum, Cross-Functional Collaboration

PROJECTS

CuReM – Customer Retention Model (Hackathon Winner) | *LangFlow, FastAPI, AWS, OpenAI, XGBoost* 2024

- Built a **multi-agent AI workflow** predicting churn, bundling personalized offers, and scheduling omni-channel outreach with full traceability.
- Designed a 3-layer architecture — deterministic ML/rules (L1), LLM reasoning/copy (L2), and policy-based scheduling (L3) — with guardrails for consent, confidence thresholds, and discount caps.
- Won **1st place** in company-wide hackathon for measurable retention uplift and hybrid AI design.

CloakVPN – Personal Cloud VPN Orchestrator | *Python, Terraform, AWS EC2, Tkinter* 2024

- Developed a one-click desktop app to spin up/tear down VPN servers across AWS regions with real-time latency metrics.
- Reduced cost to **\$0.004/hr per instance** — 97% cheaper than commercial VPNs. [GitHub](#) | [Article](#)

Highly Scalable URL Shortener | *AWS Lambda, MongoDB, Lambda@Edge* 2024

- Serverless URL shortener with collision-free key generation and sub-millisecond redirects, deployed globally via Lambda@Edge. [Website](#) | [GitHub](#)

EDUCATION

Indian Institute of Technology, Bhubaneswar

B.Tech (Honors) in Electronics and Communication Engineering CGPA: 8.56/10

Khordha, Odisha

Jul 2017 – May 2021

CERTIFICATIONS

AWS Certified Solutions Architect: Associate Level — [Certificate](#) | [Badge](#)

Vault Fundamentals by Thought Machine: Credential ID 68637848 (Issued: Feb 2023)