

VAIBHAV BAIRAGI

Bengaluru, India | +91 78692 55067 | vaibhavbairagi105@gmail.com | [linkedin.com/in/vaibhav-bairagi-sse/](https://www.linkedin.com/in/vaibhav-bairagi-sse/)

Senior Software Engineer | Backend & Distributed Systems Engineering | System Design & Performance Engineering

PROFILE SYNOPSIS

- Solution-driven IT professional with **4+ years** of experience designing, developing, scaling, and optimizing high-volume backend platforms and distributed systems within the FinTech environment.
- Skilled in **Java, Spring Boot, Microservices, System Design, Distributed Systems, Event-Driven Architecture, Kafka, ActiveMQ, Asynchronous Processing, Caching, and Idempotency**, supporting platforms handling billions of API operations and events daily.
- Proven ability to own and deliver **complex engineering and product initiatives** end-to-end, spanning architecture, technical design, development, integration, performance engineering, reliability, production readiness, and cross-functional delivery.
- Demonstrated success in architecture simplification, scalability, and infrastructure optimization, including consolidation of **57 microservices into 32 to deliver \$500K in annual savings**, along with an additional **\$120K annual cloud-cost reduction** through optimization of a high-traffic distributed service.
- Hands-on expertise in **Generative AI, Agentic AI, LLMs, AI Agents, Claude Code, and MCP**, developing AI-powered engineering and debugging solutions while contributing to technical leadership, engineering quality, mentorship, and developer productivity.

AREA OF EXPERTISE

Backend Engineering | Distributed Systems | Microservices Architecture | System Design | Scalable Systems Design | Event-Driven Architecture | High-Availability Systems | API Design & Development | Performance Engineering | Reliability Engineering | Platform Engineering | Asynchronous Processing | Message-Driven Architecture | Caching & Data Optimization | Idempotency & Fault Tolerance | Observability & Monitoring | CI/CD | Architecture Modernization | Production Readiness | AI-Assisted Software Engineering

TECHNICAL STACK

Programming Languages: Java, Python, JavaScript, C, C++, SQL

Backend & Frameworks: Spring Boot, Node.js, React, REST APIs, Microservices

Distributed Systems & Architecture: Distributed Systems, Event-Driven Architecture, **Kafka, ActiveMQ**, Message Queues, Asynchronous Processing, System Design, Data Architecture

Performance & Reliability: Performance Engineering, Performance Optimization, Caching, Idempotency, Scalability, Observability, CI/CD

AI & Developer Tools: Generative AI, Agentic AI, LLMs, AI Agents, Claude Code, MCP, AI Developer Tooling

PROFESSIONAL EXPERIENCE

PayPal India Pvt. Ltd | Software Engineer 2

Jul 2022 – Sept 2026

Career Progression: Software Engineer 1 → Software Engineer 2 | Promoted in February 2025

- Owned and delivered **large-scale backend and distributed-systems** initiatives within **PayPal's Activities ecosystem**, supporting one of the company's most frequently visited customer experiences and enabling millions of consumers and merchants to view, track, and manage their financial activities.
- Drove **end-to-end engineering initiatives** across the Financial Activities Platform (FAP), Activity Lifecycle Platform (ALP), scheduling services, business-rule engines, and customer communication platforms, with ownership spanning architecture, system design, development, optimization, reliability, and production delivery.
- Promoted to **Software Engineer 2 in February 2025**, reflecting increased architectural ownership, technical responsibility, and engineering impact.

Key Deliverables:

- Owned the **architecture, design, and reliability** evolution of the Timer platform (Scheduled Actions as a Service) as **Technical SME**, supporting **10M+** scheduled actions per day. Introduced idempotency controls to eliminate duplicate deliveries and migrated system triggers from batch processing to a message-queue-based architecture, improving availability from **99.99% to 99.999%**.
- Designed and integrated** backend capabilities for PayPal's Rewards experience within Activities, enabling customers to view reward activities alongside transactions while supporting reward processing for **5–6M transactions per day**.
- Led an end-to-end architecture simplification initiative across two core backend platforms, consolidating **57 microservices into 32**, reducing annual infrastructure costs by **\$500K**, lowering maintenance effort by **50%**, and completing the transformation with **zero customer impact**.
- Redesigned thread-allocation mechanisms for a high-traffic distributed service handling **4.4B+ requests per day**, reducing cloud infrastructure costs by **64% (\$120K annually)** while improving latency and reducing errors without modifying public APIs.
- Engineered an automated change-management solution for a configuration platform, reducing a six-step manual process to a single API call while maintaining compliance requirements and improving operational efficiency by **97%+**.
- Optimized internal service communication through caching and request deduplication, reducing redundant calls by **77%, from 1B+ to 235M per day**, and improving system response times by up to **32%**.
- Strengthened **notification-platform reliability** by redesigning a real-time data-refresh pipeline using asynchronous processing, retry mechanisms, and an internal scheduling service; eliminated duplicate customer notifications and achieved **zero data-refresh pipeline failures since launch**.

AI Engineering & Developer Productivity:

- Developed a **Claude Code orchestration plugin** that transforms Jira tickets into a resumable, context-aware **12-phase engineering workflow** spanning requirement understanding, design, development, validation, and delivery, extending automation through pull-request creation.
- Engineered an **AI-assisted debugging solution** combining static analysis with live application debugging, including a headless Java debugger server and **MCP-based tooling** for application execution, breakpoint management, and root-cause identification.
- Automated a **company-wide Harness migration workflow** for microservices using Claude Code, simplifying a **30-step manual migration process to two pull-request merges** and significantly reducing engineering effort.
- Built a **Claude Code meta-skill** that adapts and corrects skill execution based on user context, improving consistency and effectiveness across AI-assisted software-development workflows.

Leadership & Technical Ownership:

- **Technical SME – Timer/Scheduled Actions as a Service:** Owned architecture and design decisions for the platform, providing technical direction across scalability, reliability, integration, troubleshooting, and production readiness.
- **EBR Lead:** Led **50+ client onboardings** across ALP Ingestion & Search, Timers, and Monitors over two years, driving end-to-end integration, troubleshooting, production readiness, and stakeholder coordination.
- **Quality Lead:** Championed engineering and code-quality standards across components handling **400M+ client requests** daily, helping maintain **99.99%+ availability** while strengthening application stability and reliability.
- **Mentor:** Mentored **one intern and two early-career engineers** over a full year, providing technical guidance, code-level support, and career development; recognized with the **Paragon Award for mentorship**.

KEY RECOGNITION

- **PayPal Trailblazer Award - Employee of the Year:** Recognized for outstanding technical contribution, ownership, and organizational impact.
- **Two Paragon Awards:** Recognized for contributions to mentorship and configuration-change automation.
- **Cross-Functional Enabler Award – 2025:** Honored for deep platform expertise and contributions toward improving platform reliability.
- **PayPal Cloud India Summit – Winner, 2026:** Won the Run Serverless Application on Cloud category.
- **Earned 33 peer-recognition awards** between 2024 and 2026 for technical excellence, collaboration, mentorship, and engineering impact.

EDUCATION

- **Bachelor of Technology in Computer Science**, National Institute of Technology (NIT), Tiruchirappalli, India | 2021 | **CGPA:** 7.64/10