

KIRAN U KAMATH

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Experience

- **Lead Software Engineer** *Apr 2026 – Present*
PayU Bengaluru, IN
 - **Team Leadership:** Lead a team of 7 engineers across the Fraud Risk Management platform, owning the AOP roadmap and driving technical prioritization, quarterly planning, and delivery.
 - **Agentic AI and Production Stability:** Designing agentic AI use cases and workflows and improving observability, reducing incidents, and establishing engineering standards across the team
- **Senior Software Engineer** *Apr 2023 – Mar 2026*
PayU Bengaluru, IN
 - **System Re-Architecture:** Spearheaded migration of the Trident FRM system from a monolithic Java app to a scalable, multi-tenant microservices architecture using Spring Boot, RabbitMQ, and Couchbase — delivering significant cost reductions and performance improvements.
 - **Rule Engine Development:** Designed a rule engine processing 5x the previous transaction volume, supporting dynamic rule authoring and real-time execution without redeployment.
 - **Real-Time Statistics:** Developed an optimized real-time statistics computation model for rule evaluation using Couchbase as an in-memory database for low-latency data fetch and storage.
 - **Workflow Automation:** Designed fraud detection and AML workflows using Camunda BPMN for multi-level approvals and process orchestration.
 - **Performance Optimization:** Reduced decision engine latency from 630ms to 50ms via Java Profiler and memory leak analysis. Scaled throughput from 40 TPS to 200 TPS per node (4-core, 8GB RAM VM).
 - **Feature Development:** Implemented case management workflows, real-time currency conversion, suspicious entity detection, and entity profile enrichment.
 - **Engineering Excellence:** Led code reviews enforcing SOLID principles, design patterns, and an API-first approach across the team.
- **Software Engineer** *Apr 2021 – Apr 2023*
PayU Bengaluru, IN
 - **Reporting Service:** Delivered a customized reporting service powered by Couchbase Analytics, reducing TAT from hours to minutes while offloading operational database load.
 - **Rule Engine – Case Manager:** Contributed to FRM Trident 2.0, enhancing rule engine capabilities and building the case manager portal for fraud monitoring.
 - **DBInsert Microservice:** Designed a DBInsert Microservice using RabbitMQ, Kafka, MySQL, and Couchbase for seamless data transformation and integration between messaging systems and databases.
- **Associate Software Engineer** *Sep 2020 – Apr 2021*
PayU Bengaluru, IN
 - Worked on ML model development for RBA Scorecard and Fraud ML models — including hypothesis testing, feature engineering, and hyperparameter tuning.
 - Integrated ML models into the FRM Rule Engine.

Summary

Lead Software Engineer with 6+ years of experience building high-performance, scalable systems in fintech. Specializes in fraud risk management platforms, microservices architecture, and low-latency distributed systems.

Education

- **B.E. – Information Science & Engineering** *GPA: 8.24*
National Institute of Engineering 2016 – 2020
- **Cloud Native Application Architecture**
Certificate
Udacity 2023
- **Data Scientist Nanodegree** *Certificate*
Udacity 2021

Skills

- **Languages:** Java, Python, SQL, Shell
- **Frameworks & Tools:** Spring Boot, Hibernate, Camunda BPMN, REST APIs, Java Profilers
- **Databases & Caching:** Couchbase (NoSQL), MySQL, Redis (Lua scripting), Elasticsearch
- **Messaging & Streaming:** RabbitMQ, Apache Kafka
- **DevOps & Cloud:** Docker, Kubernetes (basic), AWS (EC2), CI/CD
- **Practices:** API-first design, SOLID principles, Design patterns, Code reviews

Projects

- **KiraDB – Github:**
Redis-compatible database with adaptive tiered storage (memory → SSD → S3). Built-in feature flags, rate limiting, and semantic caching for AI workloads.
- **Ticket Booking Backend – Github:**
High-concurrency booking system using Redis and Lua scripts to manage seat availability and prevent overselling under parallel load.