

# ADARSH KUMAR

## Senior Staff Software Engineer

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### PROFESSIONAL SUMMARY

Software engineer with 10 years of experience building and scaling financial platforms, payment systems, and crypto exchanges across Southeast Asia. Specialized in distributed systems, platform reliability, and high-throughput backend services. Track record of taking systems from zero to millions of users, co-founding a venture-backed startup, and leading engineering teams across multiple countries. Strong IC with deep technical acumen and a product-oriented mindset.

### TECHNICAL SKILLS

**Languages:** JavaScript, Python, Golang, Java, Solidity

**Backend:** NestJS, Node.js, Temporal Workflows, n8n

**AI & LLM:** MCP, RAG pipelines, Vector DBs (Pinecone, pgvector), LLM context management, agentic workflows, AI-assisted code review & test generation, prompt engineering, shared context architectures

**Databases:** PostgreSQL, MongoDB, DynamoDB, Redis, ClickHouse, Pinecone DB

**Cloud & Infra:** AWS, Kubernetes, Terraform, Helm, CI/CD

**Messaging:** Apache Kafka, RabbitMQ, SQS

**Monitoring:** Datadog, Grafana, PagerDuty, Sentry, Splunk

**Frontend:** React, React Native, Redux, Angular

**Data & Analytics:** Apache Spark, Flink, Databricks, Redash, Looker

### WORK EXPERIENCE

**StashAway** | Kuala Lumpur, Malaysia

**Senior Staff Engineer** Apr 2024 – Present

- **Platform Modernization:** Inherited a monolithic system serving **500K+ users across 5 SEA markets**, where one team's changes regularly broke another's features. Led the decomposition into **12+ microservices** with clear API contracts and **Kafka**-based event messaging. Ran the entire migration with **zero downtime**.
- **Release Velocity & Scalability:** Post-migration, release cycles dropped by **40%**, and the platform now comfortably handles **3x traffic spikes** during market volatility events without anyone getting paged frequently.
- **Onboarding & Conversion:** Signup funnel had a **45% drop-off** due to a fragmented 8-screen flow for KYC, auth, and account setup. Consolidated auth into **OAuth2 + MFA**, parallelized KYC checks to run in the background, and cut the flow down to 4 screens. Signup time **down 35%**, conversions exceeded leadership's target by **10%**.
- **Infrastructure Cost Reduction:** AWS staging costs were growing **20% QoQ** with no governance. Set up automated resource scheduling, right-sized **EC2/EKS** instances using **Datadog** utilization metrics, and moved everything to **Terraform** with cost tagging. Result: **30% cost reduction (~\$180K/year)** redirected to production scaling.
- **AI-Assisted Dev Tooling:** Introduced **MCP-based** automated code review and test generation to clear a bottleneck where senior engineers spent **30% of their time** on routine PR reviews. Review turnaround **cut by half**, overall team shipping speed **up 25%**.
- **API Design & Platform Contracts:** Defined and enforced **API design standards** across all 12+ services—versioned contracts, consistent error handling, pagination patterns, and OpenAPI specs. Made it so any team could integrate with any service without a Slack message to the owning team.
- **Disaster Recovery & Incident Management:** Designed and ran **chaos engineering exercises** and built a DR playbook covering database failover, cross-region backup, and service degradation procedures. Established an **on-call rotation** with a structured incident review process that cut the mean time to recovery.
- **Mentorship & Team Growth:** Built a structured program for **8 engineers**, weekly architecture walkthroughs, pair programming rotations, and a monthly tech talk series.
- **Cross-Functional Collaboration:** Worked closely with product, compliance, and data science teams across **5 countries** to align technical roadmap with business priorities. Translated regulatory requirements in different SEA markets into platform features without slowing down delivery.

**Xendit (YC S15)** | Philippines, Indonesia & Malaysia

**Technical Lead** Sep 2022 – Feb 2024

**Senior Software Engineer** Feb 2021 – Aug 2022

- **Payment Routing Engine:** Xendit processed **\$15B+/year**, but routing was manual; if a bank channel went down, someone had to notice and switch traffic. Built a real-time routing engine with **channel health scoring** and **automatic failover** across **30+ bank/e-wallet integrations** in 3 countries. Processing time: **8s → 2.4s**. Success rate: **88% → 97%**.
- **Circuit Breaker & Resilience:** During peak hours (**10K+ QPS**), a single channel going down would cascade and take others with it. Built a fault isolation layer with **automatic channel isolation** and graceful degradation. Failed transactions **down 250%**, achieved **99.99% platform availability**.
- **Storage & Cost Optimization:** **500M+ transaction records** were inflating costs and degrading query performance (p99 > 3s). Introduced **S3 lifecycle policies** with intelligent tiering, optimized database indexes, and added **read replicas** for analytics. S3 costs **down 65%**, DB costs **down 40%**, p99 latency **under 200ms**.
- **Notification System:** Built a unified transactional service for **WhatsApp, SMS, Viber, and email** with automatic fallback (if WhatsApp fails, tries SMS, then email) and full delivery tracking. **99.5% delivery rate** across **10M+ monthly notifications**.
- **Observability & Monitoring:** Built real-time dashboards and alerting for payment success rates, partner health, and circuit breaker state using **Datadog** and **Grafana**. Gave the on-call team full visibility into what's happening across all payment channels.
- **Reconciliation & Idempotency:** Implemented payout retry and reconciliation logic using **distributed transaction patterns** (outbox pattern, idempotency keys) to ensure no transaction was ever lost or double-processed, even during partner bank outages.
- **Partner Bank Integration:** Integrated with partner bank APIs across **3 countries** with robust fallback logic and consistent **SLA tracking**. Built automated health checks that tracked each partner's uptime, latency, and error rates in real time.
- **Team Leadership & Hiring:** Led and mentored a **6-person engineering team**. Brought in code review standards and **TDD practices** that the team had been lacking, and started running proper sprint retros. Led technical hiring and helped grow the broader payments org. Delivery velocity **up 35%** over the first two quarters.
- **Architecture Reviews:** Served as a core member of Xendit's **Architecture Review Group**, reviewed system designs across multiple teams, drove alignment on patterns and standards, and **cut cross-team review time by 80%** by introducing structured review templates and async feedback cycles.

## On Demand Deals | Manila, Philippines

*Co-Founder & CTO* May 2021 – Sep 2022

- **Startup from Scratch:** Co-founded a SaaS platform for the F&B industry; restaurants, cloud kitchens, QSR chains. Owned all **technical decisions, hiring, vendor relationships**, and product delivery end-to-end.
- **Full-Stack Platform Build:** Built the entire platform solo initially (**React, Node.js, PostgreSQL, AWS**), then hired and managed a team of **4 engineers**. Kept the stack deliberately simple so we could move fast without drowning in operational overhead.
- **Fundraising & Investor Relations:** Pitched investors, built the financial model, and ran technical due diligence calls. Closed **\$480K pre-seed** from **Iterative (YC for Southeast Asia)** and **Accelerating Asia**.
- **Rapid Growth:** Scaled to **50+ shop locations** across Manila in 6 months, hitting **\$1.37M GMV** with **200% month-over-month growth**.
- **Operations & Infra:** Set up the full operational playbook from zero, **CI/CD pipelines, database backup, and recovery** procedures. Everything needed to run production SaaS without a dedicated DevOps team.
- **Partner & Vendor Management:** Managed relationships with **payment providers**, POS system integrators, and delivery partners. Negotiated technical integrations and commercial terms, wearing the CTO and biz dev hats simultaneously.
- **Data-Driven Product Decisions:** Built analytics dashboards to track per-location GMV, customer retention, promo ROI, and order patterns. Used the data to prioritize what features to build next—helped us double down on what was actually driving **200% MoM growth**.

## PDAX (Philippines Digital Assets Exchange) | BGC, Philippines

*Senior Software Engineer* Nov 2019 – Feb 2021

*Software Engineer* Mar 2018 – Nov 2019

- **Founding Engineer:** Joined when there was no existing platform; everything was built from scratch. Was part of the core team that grew PDAX into a **top-3 regulated crypto exchange** in the Philippines.
  - **Trade Matching Engine:** Built the core engine handling **5K+ concurrent orders** with **sub-100ms matching latency**. Designed for horizontal scaling to absorb the traffic spikes that come with crypto market volatility.
  - **Payments Integration:** Connected with major Philippine banks (**BDO, BPI, UnionBank**) and e-wallets (**GCash, PayMaya**) for fiat deposits and withdrawals. Settlement time: **3 days → real-time**.
  - **Product Launch – LOCQ:** Designed and launched a **first-of-its-kind fuel futures product**—prepaid gas at today's prices on the blockchain. Differentiated PDAX in the market and drove a wave of non-crypto-native users.
  - **Risk & Compliance Tooling:** Built the admin dashboard and real-time monitoring; alerts for suspicious trading patterns, large withdrawals, and **KYC compliance checks**. Critical tooling for a regulated exchange.
  - **Wallet & Ledger System:** Built the internal wallet and ledger infrastructure that tracked all user balances, deposits, and withdrawals across crypto and fiat. Ensured **double-entry accounting accuracy** and full auditability for regulatory compliance.
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- **Performance & Reliability:** Optimized the trade engine and API layer for reliability under load, added connection pooling, query caching with **Redis**, and graceful degradation during high-traffic crypto events. Platform uptime stayed above **99.9%** even during major market swings.
- **Technical Growth:** Grew into the Senior role and took on **architecture ownership**, design reviews, and helped establish coding standards and deployment practices for the growing team. Mentored **junior developers** and played a key role in early engineering hiring.

**Primus Software Corporation** | Greater Noida, India

**Software Engineer** Sep 2017 – Mar 2018

- **Enterprise Applications:** Built web and mobile applications for clients in healthcare, logistics, and education using **React, Angular, Node.js**, and **PostgreSQL**.
- **Pre-Sales PoCs:** Led **3 proof-of-concept projects** end-to-end for business development; scoped the technical approach, built working demos in 2–3 weeks, and presented alongside sales. All three helped **win new client contracts**.
- **Team Delivery:** Owned frontend architecture and API design on a logistics tracking platform with a team of 5. First experience taking real ownership of a system that others would maintain long-term.
- **Reusable Libraries & Standards:** Helped build early **reusable component libraries** and coding standards for the internal development team. Took initiative, mentoring interns and new joiners; played a role in establishing the team's early engineering practices.

## EDUCATION

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### Bachelor of Technology in Computer Science

G.L. Bajaj Institute of Technology & Management, Dr. A.P.J. Abdul Kalam Technical University, India

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