

Ragul Kumar

Architecture | Engineering | Product Management | Scaling Global Teams | MIT
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Summary

- Versatile engineering leader with 20+ years of hands-on product, engineering, people, and strategic leadership in both Fortune 500 and startup environments in banking, capital markets and payments.
- Led the engineering of the largest open-source Java-based BPM platform on the Eclipse Foundation.
- Led the product and engineering of highly scalable (500K TPS) blockchain-based decentralized application data platform using GoLang, ReactJS, RESTful and gRPC APIs, ZeroMQ, W3C DID, Consul, Graffana, Prometheus, Docker, Kubernetes and AWS.
- Proven in building and leading diverse, globally dispersed teams – have built and led four different product teams of 30+ highly skilled product owners, SCRUM masters, architects and engineers.
- Deep technical expertise in algorithms, emerging trends, research, system design, and programming across languages and platforms – winner of two enterprise-wide hackathons showcasing AI/ML, Computer Vision, BigData and creative data visualizations.

Experience

CTO / Head of Engineering - Kandola Network (from 2022)

Kandola Network is an early-stage startup that is building a decentralized database and real-time data exchange.

- Hired, built and managed teams of researchers, architects, and engineers with history of scaling disruptive applications to population scale and directed the engineering of the MVP, iteratively in nine months and achieved an unprecedented throughput of 500K transactions per second.
- Onboarded four early-adopter enterprise customers in the Americas and AsiaPac to develop trustless solutions for drone manufacturing, IoT, audit SaaS and media asset management.
- Championed innovation using AI/ML, OpenAI, Cloud-computing, Self-Sovereign Identity (W3C DID, WebAuthn), Zero-Knowledge Cryptography (ZK-SNARK), gRPC API, QUIC(HTTP/3).
- Invented the Proof of Real-time Transfer (PoRT) Protocol for decentralized data storage and exchange, resulting in four patents and three IEEE full-paper publications.
- Instrumental in raising \$650k in pre-seed funding from top-tier VCs and directed funds into protocol research, design and MVP development.
- Shaped the company's identity, technology strategy, long-term vision, and goals; defined and executed the product roadmap; worked in close collaboration with executives.

Senior Technical Product Manager, FIS (2015-2022)

FIS is a Fortune 300 enterprise with a revenue of \$14 billion and 70,000 employees. FIS is the leading provider of technology solutions for merchants, banks, and capital markets firms globally with 100+ FinTech products.

- Reported directly to the Chief Product Officer; established the product's goals, strategy; oversaw the requirements, roadmap, UX and product backlog for the Fabric SaaS platform, a Java-based Low-Code-No-Code application platform that launched new FIS products targeting a \$100M market.
- Specified product roadmap, epics, user stories, system design, architecture and UX for the largest open-source Java-based BPM platform in the Eclipse Foundation leveraged by the likes of Deutsche Bank, Key Bank and UMB with 100k+ daily users.
- Leveraged AI/ML for 'Virtual Reconciler' that learned patterns from sub-ledger reconciliation exceptions and autonomously corrected certain classes of exceptions, resulting in decreasing manual reconciliation by 80%.

- Drove the development of highly scalable SaaS products using microservices, AWS and Azure cloud-native constructs, MySQL, MongoDB, Data Lake, ReactJS, Kubernetes, Docker, Jenkins, Git, etc.
- Formed and led three agile squads (32+) of highly-empowered, high-quality architects, product owners, UX designers, and front-end, back-end (microservices) and DevOps engineers across US, Germany and India.
- Managed and prioritized the product backlog and release burndown; achieved 2X velocity within 6 months across squads by working closely with the SCRUM masters and promoting creative productivity processes.
- Reported to the SVP, Alternative Investments; worked closely with division executives, marketing, product managers and architects to align technology and product initiatives with strategic business objectives.
- Played a pivotal role in securing \$5M in funding for the Fabric Platform from the corporate Growth Office.

Technical Program Manager / Architect / Software Engineer, SunGard (2004-2015)

SunGard, a Fortune 500 with a revenue of \$5 billion, is a leading provider of technology products for financial services, energy, higher education, and public sector.

- Created the product roadmap and backlog; spearheaded the development of the Java-based SunGard Infinity SaaS Platform from conception to release, managing cross-functional and cross-product teams.
- Architected and implemented the Financial Systems IaaS initiative, resulting in a new product offering, increased adoption, ROI, and reduced time-to-market from 8 weeks to 16 hours for SunGard datacenter businesses.
- Built 5 offshore teams in India consisting of 40+ team members from scratch, improving scale and software delivery efficiency across product-lines; created and oversaw development processes and SOPs for on-shore / off-shore development processes for teams across US, Canada, Germany, Singapore, Tunisia, and India.

Education

- **MIT xPRO Technology and Innovation Acceleration Program** – Massachusetts Institute of Technology
- **Lecturer / Lead, Media Lab** - Birla Institute of Technology and Science, Pilani
- **Master of Engineering Software Systems** - Birla Institute of Technology and Science, Pilani, India
- **Master of Science (Honors) Physics** - Birla Institute of Technology and Science, Pilani, India

Patents & Publications

- **Patent:** Learning based remote attestation for optimizing finality protocols in Web3 applications
- **Patent:** Proof of Real-time Transfer: A Consensus Protocol for Decentralized Data Exchange
- **Patent:** Security and privacy framework for real-time streaming of IoT data in decentralized p2p networks
- **IEEE BCCA:** A Consensus Protocol for Decentralized Data Delivery and Storage
- **IEEE ICBC:** Proof of Real-time Transfer: A Consensus Protocol for Decentralized Data Exchange

Skills

Engineering and Technology Leadership: Emerging Technologies | Technology Strategy & Innovation | Software Architecture | System Design | Algorithms | Concurrency | Security | Cryptography | Software Engineering | AI/ML | Blockchain | Distributed Ledgers | Microservices | Containerization | Cloud (AWS, Azure) | Web Applications | API | Open-Source | Research | Patents | Journal Publications | GoLang | Java | JavaScript | TypeScript | NodeJS | ReactJS | Angular | MySQL | MongoDB | Data Lake | Git | DevOps | CI-CD | Docker | Kubernetes | Terraform | Jira

Product Leadership: Product Vision | Product Strategy | Product Roadmap | Product Development | Product Management | Defining Product Requirements (master-features, features, epics and user-stories) | UX Design