

Arup Kanti Dash

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PROFESSIONAL SUMMARY

AI solutions architect and hands-on builder with 9 years scaling enterprise platforms and 3+ years designing production agentic and GenAI systems. Architected a RAG assistant that cut confident-wrong answers from ~35% to ~8% through semantic chunking and citation tracing; designed an agentic AI assistant on AWS Bedrock (action groups, tool use, retrieval, guardrails); and shipped EPath, an AI-native SaaS, end to end on Claude. Led platform architecture for 150+ enterprise tenants, delivered the first production GenAI features under SOC 2 and PCI DSS, and executed a 10M-row zero-downtime migration. Anthropic MCP-certified. Translates ambiguous goals into reliable, cost-aware AI systems and designs for failure modes from day one.

CORE COMPETENCIES

Agentic AI Architecture	RAG Pipeline Design & LLM Orchestration	AWS Bedrock & Cloud AI	AI Solutions Architecture
Model Context Protocol (MCP)	Production GenAI (SOC 2 / PCI DSS)	Enterprise Integration & OMS	Failure-Mode-First Design

WORK EXPERIENCE

Thoughts2Binary

Sep 2020 - Present

Vertical Lead, Server-Side Engineering & Architecture | Gurugram, India

- **Architected a production RAG assistant** for an enterprise commerce platform on AWS Bedrock (OpenSearch vector store, Cohere embeddings). Diagnosed confident hallucinations as a retrieval problem via citation tracing and evolved chunking from size-based (~35% wrong) to header-based (~15%) to semantic (~8%), citations preserved throughout.
- **Designed an agentic AI assistant on AWS Bedrock**, specifying the full system: data flow, action groups, tool/function calling, retrieval pipeline, and failure-mode guardrails for the implementation team to build against.
- **Delivered the platform's first production GenAI features** (RAG pipelines, LLM APIs) into core workflows under SOC 2 and PCI DSS; led team-wide upskilling in prompt engineering and AI-assisted development.
- **Re-architected the commerce event pipeline** on AWS Lambda + SQS with tenant isolation, retries, DLQ/re-drive, and back-pressure controls, cutting event lag from 4+ minutes to near real-time and Lambda cost ~15%.
- **Designed and executed a zero-downtime migration framework** for 150 tenants (10M rows, 30+ tables) using dual-write/shadow-read validation and per-wave rollback. Production incidents dropped from 20 to 2; new-tenant onboarding ~25% faster.
- Own end-to-end solution architecture for 150+ enterprise tenants across commerce event pipelines (orders, products, shipments, refunds), ETL workflows, and mobile backends. Run build-vs-buy analysis and solution design with product and client stakeholders, with cost as a first-class constraint.
- Reduced Sev-1 incidents ~50% and MTTR ~30% via centralized observability (CloudWatch, New Relic, structured logging) and rollback-ready releases; cut infrastructure cost ~20% through environment right-sizing.
- Led SOC 2 Type II compliance end to end with zero escalated findings; aligned engineering practices with PCI DSS, GDPR, and DPDP for enterprise clients.
- Led 14 engineers across three pods (backend, integrations, data); grew senior engineers into pod leads with people-management responsibility; own hiring, performance reviews, and roadmap delivery.

Thoughts2Binary

Aug 2018 - Aug 2020

Senior Software Developer | Gurugram, India

- Reworked PostgreSQL queries and REST endpoints, cutting response times from 1s+ to under 500ms (~70% improvement); enforced CI/CD standards that eliminated unreliable releases.
- Led two squads (backend and frontend) using Scrum; mentored ~12 engineers through code reviews and architecture sessions, establishing coding and documentation standards.
- Established monitoring and instrumentation across services to improve reliability and scalability.

Software Developer / Associate Software Developer | Gurugram, India

- Built a reusable ETL-based migration framework; migrated 10M+ rows across enterprise projects with zero data loss.
- Developed 30+ REST APIs for web and mobile integrations; integrated legacy SOAP payment APIs, reducing manual intervention 40% and accelerating settlements 25%.
- Designed secure, reliable backend architectures and APIs for enterprise and mid-scale applications.

PROJECTS

EMpath Live

AI-native SaaS for engineering managers, built and shipped solo end to end. Features: structured 1:1 capture, engineer growth profiles, AI-generated growth/strength/risk suggestions (Claude), evidence-linked performance trends across 1:1s, action-item carry-forward, and dual EM/engineer perspectives.

Next.js | Node/Express | PostgreSQL | Clerk | Anthropic Claude API

Agent-Orchestrated Software Delivery R&D

Building software through an orchestrated fleet of AI agents with architect and sole decision-maker role over architecture, security review, and failure-mode assessment each iteration. An ongoing experiment in agent-only delivery and where human judgment stays essential.

Anthropic Claude | MCP | Multi-agent orchestration | Agentic architecture patterns

EDUCATION

PGDM in Product and Strategy — [MDI Gurgaon \(Management Development Institute\)](#) 2024 - 2026

Pursuing

B.Tech in Computer Science and Engineering — [Maharishi Dayanand University](#) 2013 - 2017

CERTIFICATIONS

[Anthropic AI & Model Context Protocol Certification Track](#) | [Anthropic Education](#) — 4 modules: Claude API, AI Fluency, MCP Advanced Topics 2026

SKILLS

AI & Agentic Systems: Agentic architecture (action groups, tool/function calling, multi-step orchestration, human-in-the-loop), RAG (chunking strategy, retrieval evaluation, citations/grounding), LLM APIs (Anthropic Claude, OpenAI), AWS Bedrock, Model Context Protocol (MCP), prompt engineering, vector search (OpenSearch), AI guardrails and failure-mode design, LLM evaluation and observability

Architecture: Distributed systems, multi-tenant SaaS, event-driven architecture, microservices, platform engineering, API and integration architecture, observability (Datadog, New Relic, Grafana), Order Management Systems (OMS)

Cloud & DevOps: AWS (Lambda, ECS/EKS, RDS, S3, SQS, CloudWatch, Bedrock, Route53), Docker, Kubernetes, Terraform, GitHub Actions, CI/CD

Backend & Data: Python, Django, Django REST Framework, FastAPI, Celery, REST APIs, Webhooks; PostgreSQL, MongoDB, DynamoDB, Redis, OpenSearch; ETL pipelines, large-scale data migrations

Compliance & Security: PCI DSS, SOC 2 Type II, GDPR, DPDP, RBAC, audit readiness