Nitish Gupta

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Technical Skills

Languages: Java, Go, Python
Frontend: Angular, React
AI and LLM: LangChain, LLMs, and multi-agent AI applications
Frameworks: Spring Boot
Infrastructure: Apache Kafka, Kubernetes, Terraform, Docker, AWS CloudFormation
Architecture: Event-Driven Architecture, REST APIs
Databases: MongoDB, MySQL, PostgreSQL, Redis
Observability: Prometheus, Grafana, ELK Stack (Elasticsearch, Logstash, Kibana)
Testing: JUnit5, Mockito, Cucumber
AI Tools: Claude Code, GitHub Copilot

Professional Experience

Goldman Sachs **Bengaluru, India**
Associate – Senior Software Engineer (SDE-2), Post Trade Clearing and Settlement *Sep 2024 – Present*

- **Cloud-Native Data Ingestion Platform**
  - Designed and built a new Data Ingestion platform using AWS native service like S3, Lambda, Step Functions, Aurora, Event Bridge, and AWS Managed Kafka. We also used the GS **Databricks Lakehouse** as the OLAP DB, and for IaC, we used **Terraform and Cloud-Formation Stack**.
  - I led the data modeling for this system. It caters to over **10 million daily records** for trades, positions, and valuations, across 100 global CCPs, used for Risk calculations and Regulatory reporting needs.
  - This new AWS cloud-native architecture replaced our older on-prem microservices. It brought about a **42% reduction in storage and compute Total Cost of Ownership**, which came out to approximately $1.2 million in savings per year, along with 99.99% uptime.
  - We integrated **Claude Code and GitHub Copilot** into the process for onboarding new CCP venues. This helped automate several steps: parsing Jira tickets, discovering schemas, generating code, and creating unit test scaffolding. It reduced the time for new venue onboarding significantly, going from **eight weeks down to just two weeks**, making it 75% faster.
- **Collateral Management Automation (Pledge, Recall & Substitution)**
  - **External Integrations:** We set up direct API connections with the vendor-side CCP systems. This allowed us to programmatically submit and then track collateral instructions, things like pledges, recalls, and substitutions. Also, inbound client emails, these were digitized into structured instruction objects, so manual data entry, no longer needed as the trigger for all collateral workflows.
  - **Event-Driven Lifecycle Engine:** We built an architecture that was event-driven to manage the full lifecycle of these instructions. This includes getting client instructions, performing real-time eligibility checks against both vendor and CCP rulesets, submitting to the CCP for acceptance, and finally providing acknowledgment to the client.
  - Integrated with the internal payment systems in order to receive live bank receipt confirmations for both auto-debits and auto-credits. This was for transactions occurring between GS accounts and CCPs, effectively closing the settlement loop automatically.
- **LLM powered Issue Triage Multi Agent system on LangChain**
  - **Specialized Agents and Tool Integration** The system automatically triages production alerts by orchestrating specialist agents across file, data and log sources; reduced manual on-call investigation effort by 95%.
  - **Context Engineering and AI observability** Agents are made context aware by specific md files for runbook, system context, tool awareness, specific input and output formats for each agent and pre-validations. Every Agentic step is recorded for input-output, confidence score, latency, token usage for observability and continuous improvements.

MoveInSync Technology Solutions **Bengaluru, India**
Software Development Engineer 2 – WorkInSync Team *April 2024 – September 2024*

- Feature Development on Enterprise VMS Platform:
  - Developed affiliate invitation workflows for the B2B Visitor Management System.

- Implemented QR code generation and integration with POS devices to streamline visitor check-in.
- Automated email templates for the end-to-end invitation and RSVP workflow.
- Collaborated directly with enterprise clients, including Richemont, to gather requirements, validate features, and ensure alignment with business needs.

Morgan Stanley **Bengaluru, India**

Senior Technology Associate – Platform Engineering (SDE-2 equivalent) *Jul 2021 – Mar 2024*

- **High-Performance ETL Microservices:** Engineered a multi-partitioned **Spring Batch** loader microservice in **Java** for brokerage deposits and sub-ledging, this was serving global HNI clients. Achieved a **5x throughput improvement**, processing **100M records in 30 minutes**, and reduced infrastructure RAM consumption by **80% (15 GB to 3 GB)**, we validated all this through performance and chaos testing.
- **Distributed Trade Processing at Scale:** Designed and then implemented a dynamic load distribution system. This involved migrating from legacy message queues to **Apache Kafka** for real-time event streaming. It enabled horizontal auto-scaling and parallelization across multiple VMs, scaling trade processing capacity up to **20M trades**, which was a 3x increase from before.
- **CI/CD, Observability & Engineering Standards:** Established firm-wide benchmark standards for observability integrating **Prometheus, Grafana, Spring Actuator, and Micrometer**. Implemented **Blue-Green deployments** and SonarQube in Jenkins CI pipelines. Accelerated test coverage using **JUnit5, Mockito, and Cucumber** across multiple engineering teams.
- **Awards:** Received the firm's **GRIT (Grassroots Innovation in Technology) Award** for the architectural impact of the generic loader microservice on operational efficiency and system performance.

Morgan Stanley **Bengaluru, India**

Technology Summer Analyst – Internship *Apr 2020 – Jun 2020*

- **NLP Observability Chatbot:** Developed an NLP-powered internal chatbot leveraging **Stanford CoreNLP** and the **ELK Stack (Elasticsearch, Logstash, Kibana)** for automated log querying and system health monitoring. Achieved **92% query accuracy**, significantly reducing mean time to resolution (MTTR) for engineering teams. Project was promoted to full production deployment post-internship.

Education

Motilal Nehru National Institute of Technology (MNNIT) Allahabad **Allahabad, India**

Bachelor of Technology (B.Tech) – Computer Science and Engineering | ***CGPA: 8.8 / 10*** *2017 – 2021*

- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Database Management Systems (DBMS), Computer Networks, Distributed Computing, Software Engineering, Design Patterns