SUDIPTA BANIK

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SUMMARY

Senior Software Engineer with 6+ years designing and operating high-scale distributed systems and event-driven backends at Uber, Grab, and FourKites. Specialized in Go and Java microservices across job execution systems, financial lending platforms, and real-time data pipelines. Proven track record of owning complex cross-team initiatives end to end, from system design to production, with consistent focus on reliability, latency, and measurable business impact. Seeking roles in complex high-scale backend systems, with strong interest in data-intensive and LLM powered products.

WORK EXPERIENCE

UBER

Software Engineer II   Oct 2024 – Present
Batch Compute Team   Bangalore, India

- Designed and implemented **automated fault isolation** for apache distributed job execution system using **circuit breakers and adaptive retries, reducing incident MTTR to under 60 seconds** and preventing cascading failures across downstream services.
- Built a dynamic workload admission control service to protect high-priority jobs during system stress, leveraging Kubernetes ConfigMaps for real-time policy propagation — blocking $\approx 7\%$ of total concurrent job volume.
- Improved job scheduling correctness in a distributed execution engine by centralizing ID generation and enforcing submission-time ordering, **eliminating allocation delays of up to 20 seconds** for ML and data workloads.
- Developed a ZooKeeper-backed federation controller for the YARN Router, enabling quick cluster isolation and re-attachment to **maintain system SLA** during system outages.
- Enhanced Uber's internal Kubernetes batch job observability dashboard with workload-type and job-ID search, and a resource-usage heatmap - Improving on-call debuggability and reducing time-to-insight during incidents.

GRAB

Senior Software Engineer   Aug 2023 – Oct 2024
Lending Core Team, Fintech   Bangalore, India

- Contributed to designing loan offer and credit limit generation from a monthly batch to real-time event-driven processing, reducing DB load by $\approx 30\%$ across millions of drivers and increasing loan product adoption.
- Reduced loan creation API p95 latency by almost 32% via **MySQL batch inserts** for instalment. The reduction in network round-trips and lock acquisitions **improved throughput during high-concurrency database writes**.
- Developed a **sub-second data aggregator API** integrating 5+ internal APIs for banking partners; with **partial response fallback for high availability**.
- Improved Kafka consumer framework reliability via graceful shutdown re-queuing, reducing message loss to near zero across financial transaction pipelines.
- Mentored 2 new engineers through onboarding, maintaining team velocity during hiring season.

Software Engineer   Oct 2021 – Aug 2023
PayLater Team, Fintech   Bangalore, India

- For Grab's Indonesia PayLater launch, I designed and scaled the **Refund API** to handle 10% of the countries user base. Used **idempotent and state machine design patterns**, automating retries, error recovery and complex refund flows, which handled 3M+ users gracefully.
- Built a **tiered service fee module for real-time charge APIs and batch billing systems**, implementing slab-rate logic per Indonesian regulatory requirements.
- Designed a configurable credit risk assessment module, **collaborating with product teams and external credit bureaus** to integrate country-specific requirements across **multiple Southeast Asian markets**.

- Designed and implemented a **robust lending credit score API**, integrating score from data-science team models and user metadata teams, ensuring **adherence to REST API design and security best practices**.
- Improved CI/CD build speeds by $\approx 18\%$ and increased unit test coverage by $\approx 35\%$ through Go version migration, go mod adoption, and systematic refactoring following clean code adherence and dependency inversions.

FOURKITES INC.

Software Engineer   Jun 2019 – Oct 2021
Multimodal Supply Chain Visibility Team   Chennai, India

- Architected a **Redis-backed caching layer to enable direct integration** with 10+ global maritime carriers, reducing reliance on costly third-party data providers. Designed carrier-specific configs to comply with **API rate limits and built end-to-end data parsers and update flows** — later adopted by rail and air teams. **Guided an intern through task delegation to fast-track delivery**.
- Resolved search disruptions by replacing a shared Elasticsearch dependency with a dedicated Port Autocomplete API; utilized **composite indexing and in-memory caching** for 80,000+ ports to achieve **sub-100 ms latency and operational independence**.
- **Designed an async Kafka-based maritime event enrichment pipeline** for ETA/ETD updates by **integrating data from multiple internal microservices** into a unified callback payload — ensuring event persistence, configurability, and reliable real-time shipment update delivery to customers.
- Eliminated error-prone QA processes by replacing SSH-based Ruby script execution with an **internal shipment event simulation tool** — dropdown-driven UI, event-specific data fields, and background worker integration. Delegated frontend tasks to an intern to fast-track delivery.
- Added ocean-specific features to the shipment cloning module, enabling **domain-specific data replication that improved accuracy and impact** of new client sales demos.

EDUCATION

Jadavpur University   Aug 2015 – May 2019
Bachelor of Engineering in Electrical Engineering   Kolkata, India
Relevant Coursework: C++, Data Structures & Algorithms, Computer Networks, Signals & Systems, Engineering Mathematics

TECHNICAL SKILLS

- **Languages:** Go/Golang, Java, SQL, Python, C++
- **Distributed Systems & Infrastructure:** Kubernetes (K8s), Apache YARN, Docker, AWS, GCP, Linux
- **Data Management & Streaming:** Kafka, Redis, Aerospike, PostgreSQL, MySQL
- **Frameworks & Tools:** Spring Boot, Datadog, Jenkins, Git, CI/CD

ACHIEVEMENTS

- **The Grab Way Award (Q1 2023)** — Recognized for leading engineering improvements in the BNPL project, enhancing system reliability and supporting business growth.

PROJECTS

Travelling Thief Problem   *2018*
Explored metaheuristic approaches to approximate solutions for the Travelling Thief Problem, a composite NP-hard problem coupling TSP and 0/1 knapsack selection implemented in MATLAB, under the guidance of professor at Indian Statistical Institute, Kolkata.   *Source: github.com/baniksudipta/ttp_project*

LANGUAGES

English: Full Professional Proficiency   **Bengali:** Native