

Aparna Mane

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Summary

Software Engineer with 5+ years of experience building scalable, low-latency distributed systems and REST APIs using Kafka, Flink, and FastAPI — delivering high-performance, reliable infrastructure powering data-intensive financial platforms.

Education

K. J. Somaiya College of Engineering (Autonomous), Mumbai.

June 2017 – June 2020

- Bachelor of Technology(BTECH) | CGPA - 8.23/10

Professional Experience

Senior Software Engineer, Morgan Stanley – Mumbai, Maharashtra

April 2022 – Present

- Integrated Apache Flight (gRPC) for high-speed columnar data transfer, improving throughput by 60%.
- Designed and optimized distributed data pipelines with Flink, Kafka, and Delta Lake Store for real-time data ingestion and CDC(Change Data Capture).
- Engineered fault-tolerant microservices with exactly-once processing, handling millions of high-frequency REST API operations daily with sub-millisecond latency.
- Built a Redis-based write-around cache for entitlement checks, reducing average latency from ~203ms to ~3.5ms.
- Migrated microservices authentication from Kerberos to OAuth 2.0 by implementing token-based security protocols, strengthening API security and Authorization flows.
- Designed high-throughput backend microservices and an AI-powered configuration assistant using FastAPI and OpenAI LLMs, enabling real-time decision dashboards for traders.
- Guided and mentored junior developers and interns, fostering their technical growth and career progression. Conducted technical interviews to evaluate and onboard candidates aligned with team objectives.

Associate Software Engineer, LogisticsNow – Mumbai, Maharashtra

July 2020 – Jan 2022

- Implemented database sharding and replica sets across 5+ servers, improving scalability and ensuring availability under peak load conditions.
- Automated manual fuel data processing using Azure Functions and MongoDB, streamlining batch updates and eliminating spreadsheet-based workflows.

Project Details

Dynamic Dashboard Project | FastAPI, OIDC/OAuth2, MongoDB, Kafka, Jenkins

- Developed backend APIs with FastAPI and MongoDB, utilizing Pandas for efficient data processing and analysis.
- Migrated services from SPNEGO to OIDC/OAuth2.0, improving security and data governance.
- Implemented usage logging with Kafka to track platform activity, and integrated ESM stack for end-to-end observability, adding Metrics, Logs, and Traces to monitor the backend service.
- Reduced dashboard development time from weeks to hours, enabling faster decision-making for strats and traders.

On-Prem to Cloud Migration | FastAPI, Azure Cloud, Kubernetes, OAuth2,

- Migrated JupyterLab and in-house DzPy library from on-premises to the cloud, leveraging Azure Kubernetes Service (AKS) for hosting and scaling.
- Utilized an API gateway for secure and seamless connectivity between cloud and on-premises systems, implementing asserted end-user identity with the Client Credential Grant flow for authentication.
- Replaced manual memory management with auto-scaling, optimizing resource utilization and reducing costs.

Auction Portal | Azure Cloud, Azure DevOps, Postman, Redis, Azure Cosmos DB

- Developed Backend REST APIs using Azure Serverless Function Apps, with Azure Cosmos DB for scalable data storage and auto-scaling based on load.
- Integrated SignalR for real-time bidding updates and tracking of online transporters during the auction.
- Used Redis to cache auction metadata, ensuring optimal performance and faster data retrieval.
- Conducted API testing using Postman and monitored system health with Azure Application Insights.

AWARDS

IST COE Award for Platform Modernization

Morgan Stanley, 2023

ESTAR Recognition Award for Exceptional Delivery

Morgan Stanley, 2022