Supriya Mandal

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PROFILE SUMMARY

Backend Engineer with 2+ years of experience designing and developing scalable, event-driven systems and microservices in fast-paced SaaS environments. Proven expertise in building and maintaining distributed systems using Java, Go, AWS (SQS, SNS, ECS, MSK), Kafka, and Terraform/Terragrunt. Experienced in owning critical backend components, optimizing system performance, and automating CI/CD pipelines. Passionate about system design, cloud-native architectures, and building high-reliability platforms that power business-critical workflows.

EDUCATION

Indian Institute of Science (IISc)   Bangalore
M.Tech in Computational and Data Sciences (CDS)   *2021 – 2023*

Sathyabama Institute of Science and Technology   Chennai
B.Tech in Information Technology   *2016 – 2020*

PROFESSIONAL EXPERIENCE

Backend Engineer (Platform)   Aug 2023 – Present
Chargebee   *Bangalore*

- Owned the internal **Queue Management System** (AWS SQS/SNS), managing end-to-end asynchronous workflows across multiple product teams.
- Contributed **Kafka-based eventing platform** to enhance webhook scalability and reliability, handling millions of messages daily.
- Partnered with internal teams to onboard asynchronous flows—helped in design, debugging, and testing of message-based integrations.
- Automated infrastructure provisioning using **Terraform/Terragrunt**, enabling environment parity and faster queue creation/update workflows.
- Enhanced CI/CD pipelines and automated deployments, reducing release times and increasing developer productivity
- Monitored system performance and reliability using **Datadog**, **Splunk**, and **CloudWatch**, and address issues proactively.
- Collaborated in production incident response, root cause analysis, and implemented preventive measures for recurring patterns.
- Learned taking **ownership** of the modules
- Improved code reading and debugging skills using AI tools

Computer Vision Researcher   March 2022 – July 2023
Visual Computing Lab @ IISc   *Bangalore*

- Worked on **unsupervised Deep Learning** based video anomaly detection & localization
- Worked on few shot **face recognition** system
- **Finetuned** diffferent CNN models with different datasets
- Developed skill to read research papers and implemented them

PROJECTS

Kafka based eventing | *Java, Kafka, AWS MSK, CICD, Splunk, Datadog*   July 2025 – Present

- Implemented producers and consumers for event-driven webhook delivery at scale.
- Developed the **AWS MSK** baseline infrastructure, ensuring reliability and observability.
- Contributed on **observability** to monitor the system
- Wrote unit/integration tests using TestNG

Queueman | *Java, Go, SQS, SNS, ECS, Cloudwatch, Docker, Git Action*   Dec 2023 – present

- Contributed in consumer code to handle the concurrent messages, improve throughput
- Developed **Terraform/Terragrunt** based resource management codebase to manage queues in the system
- Designed and developed **CI/CD pipelines** to create/update the queues using git actions on top of terraform/terragrunt
- Became a one of the **top maintainer** and contributor of the queueman

Other Projects

DLL Based Video Anomaly Detection | *Python, Tensorflow, Pytorch, OpenCV*   Dec 2022 – June 2023
- Developed **video anomaly detection and localization** model using **CNN-LSTM** and **3D Convolution autoencoder**
- Enhanced the model's robustness by reformulating the **video classification problem as an image classification** using the **Swin Transformer**
- Trained and tested the model in an unsupervised manner using **UCSD pedestrian dataset**

Few Shot Face Recongnition | *Python, Tensorflow, Keras, Scikit Learn*   April 2022 – April 2022
- Used **Siamese Neural Networks** (SNN) to build a face recognition system over face dataset with fewer data samples.

Technical Skills

Languages: Java, Go, Python, SQL
Cloud & Infrastructure: AWS (SQS, SNS, ECS, CloudWatch, MSK), Docker
Messaging & Event Systems: Kafka, AWS SQS/SNS, Pub/Sub
CI/CD & DevOps: GitHub Actions, CodeBuild, Terraform/Terragrunt
Monitoring & Observability: Datadog, Splunk, CloudWatch
AI Tools: Cursor, Windsurf, Github copilot, Bolt, Claude
Testing Tools: TestNG, JUnit, Git, Postman