

# Saravanan Rajendran

TECHNICAL LEAD ENGINEER

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## Professional Experience

### Motorq

Chennai, TN

TECHNICAL LEAD ENGINEER

Aug 2024 - Present

- Led development of Motorq's primary data pipeline processing **288K+ messages/minute** across SQS, Kinesis, Event Hub, and Pulsar, cutting end-to-end latency from **60s → 10s** and improving SLA compliance to **99.9%**.
- Increased pipeline reliability by **30%** by redesigning error handling, retries, and consistency checks across distributed systems.
- Built observability dashboards (Victoria Metrics) and proactive alerting to detect data inconsistencies, preventing escalations and saving \$10K/month in operational overhead.
- Created a state-machine-based enrollment framework that modularized APIs for easier debugging, faster onboarding, and a **50%** reduction in bug resolution time.
- Partnered with Operations, Product, and Customer Success to streamline vehicle onboarding workflows, cutting error rates from **40% → <0.5%** and enabling reliable downstream data delivery.
- Led the System Integration team of **7** engineers, driving cross-functional initiatives from customer onboarding to data delivery that kept mission-critical pipelines resilient at scale.

### Motorq

Chennai, TN

SOFTWARE ENGINEER

Dec 2021 - Aug 2024

- Re-architected the customer-facing distributed enrollment system to handle **10K async enrollments/minute**, consolidating 80+ processors to 3-4 processors while maintaining throughput and cutting infrastructure costs.
- Built an internal load-testing framework that reduced performance test cycles from **3 days to 2 hours**, enabling rapid iteration and production confidence.
- Designed automation for developer local setup and customer support tooling, improving onboarding productivity and shortening client request processing time by **>70%**.
- Mentored and led **5** UI engineers in a full re-architecture of customer-facing portals, boosting stability and user experience.

### Myntra

Bangalore, KA

SENIOR SOFTWARE ENGINEER

Apr 2021 - Dec 2021

- Scaled the checkout pipeline to support peak sale events, optimizing compute utilization and reducing server usage by **90%** without impacting SLAs.
- Designed a client-side observability library to capture API latencies and failures in real time, shrinking microservice outage detection from **1 day** to near-instantaneous.
- Optimized checkout flows to lift conversion rates and directly boost order volume during sale campaigns.

### Myntra

Bangalore, KA

SOFTWARE ENGINEER

Jul 2019 - Mar 2021

- Implemented a new payment processing pipeline that reduced gateway failures by **30%** and improved customer checkout reliability.
- Designed and developed flexible coupon constructs that accelerated new user acquisition through targeted promotions.
- Built a change-impact tracking library that sharpened QA focus, reducing release verification time and increasing confidence in production rollouts.

### Samsung Research Institute Bangalore

Bangalore, KA

SOFTWARE ENGINEER INTERN

May 2019 - Jul 2019

- Implemented a blockchain-based application to enhance protection and privacy of home IoT devices.
- Designed and created a Docker-based platform to emulate multiple hosts and IoT devices.
- Passed Samsung's Advanced Test, a highly competitive programming challenge.

### MySwots

Remote work

SOFTWARE ENGINEER INTERN

Apr 2017 - May 2017

- Implemented a note-taking application to help students track and retain learning content.
- Developed a system to convert base64 images to cloud-hosted images and update web page references automatically.

### National Informatics Centre (NIC)

Chennai, TN

SOFTWARE ENGINEER INTERN

May 2018

- Implemented a new load balancing algorithm to handle heavy load and improve fairness.
- Increased system throughput by **20%** through algorithm optimization.

## CEGLUG

### PROGRAMMING MENTOR

Chennai, TN

Sept 2017 - Mar 2018

- Taught programming concepts to junior students to develop their coding skills.
- Conducted courses on advanced computing concepts to foster interest in programming among department students.

## Skills

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**Languages** Node, Python

**Frameworks** Express, React

**Message Queues** Pulsar, Kafka, AWS Kinesis, Azure Event Hub, SQS

**Data Engineering** Snowflake, PostgreSQL, ETL/ELT Design, Data Modeling

## Projects

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### P-CONVOLUTIONAL IMAGE INPAINTING

- Implemented partial convolution for image inpainting tasks.
- Developed a model capable of inpainting images with irregular and random holes.
- Implemented optimizations and independently verified results.

### DEEP CODER

- Implemented Python version of Microsoft's Deep Coder research paper.
- Developed domain-specific language (DSL) and generator for all possible combinations.
- Built and trained neural network on randomly generated labeled datasets.
- Successfully validated and reproduced paper results independently.

### PALM AND FINGER REPLICATION

- Runner-up in CEG's Robotics Club competition.
- Developed computer vision-based palm and finger detection system.
- Created real-time hand movement replication system for robotic arm control.
- Implemented traditional computer vision algorithms for real-time processing.

### SYSTEM RESOURCE MONITOR

- Developed a Lua-based system resource monitor using Conky API on Linux.
- Created an efficient resource management tool optimized for mid-range systems.

## Honors & Awards

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### HACKON HACKATHON

- Won the Best Use of Elasticsearch Award at HackOn Hackathon, competing among **2500+** participants from across India.

### MYNTRA HACKERRAMP

- Finalist in Myntra's Internal Hackathon.

### ACCENTURE BLOCKCHAIN HACKATHON

- Finalist in Accenture Blockchain Hackathon among **2500+** participants.

### CHARGE BEE - WOMEN TECH FAB

- Second Runner-up in WTF Hackathon among **200+** participants.

### TIP EXPO

- Won first place in TIP Expo (Intra-college Technical Exhibition) among **150+** participants.

## Education

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### College of Engineering Guindy

Chennai, TN

BACHELOR OF TECHNOLOGY IN INFORMATION SCIENCE AND TECHNOLOGY (B.TECH.), GPA: **9.08/10**

May 2019

- **Graduated in First class with Distinction**