# SWAPNIL SURDI

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## Professional Summary

Senior Software Engineer with 7+ years of experience in building scalable backend systems, distributed services, and cloud infrastructure. Skilled in designing robust APIs, optimizing microservices, and driving cloud-native deployments. Strong background in full-stack development with a passion for performance engineering and automation.

## Qualifications

- 5+ years Python development (Automation, RESTful APIs, Microservices)
- 5+ years experience with SQL and NoSQL databases (PostgreSQL, MongoDB, Redis)
- 3+ years hands-on experience with AWS (ECS, Fargate, Lambda) and Docker
- 3+ years Java and JavaScript development (Spring Boot, React, Node.js)
- 2+ years experience designing distributed systems using Kafka and RabbitMQ
- 1+ years of Go programming for backend tooling and automation
- Experienced with CI/CD automation (GitHub Actions, Bitrise) and cloud-native deployments
- Led and mentored engineering teams, improved system observability, and optimized performance

**Technical Stack**

Python, Java, JavaScript, TypeScript, Go, SQL, PostgreSQL, MongoDB, Redis, Kafka, RabbitMQ, AWS (ECS, Fargate, Lambda), Docker, GitHub Actions, Bitrise

## Professional Experience

**Treatment Technologies & Insights** — Remote
*Senior Software Engineer* — 09/2021 – 09/2024

- Architected microservices for real-time data processing and device communications.
- Refactored backend services, reducing API calls by **30%** and optimizing system latency.
- Implemented containerization (Docker, AWS Fargate) to improve deployment efficiency and scalability.
- Developed CI/CD pipelines using GitHub Actions and Bitrise, reducing manual deployment overhead.
- Built event-driven logging and observability tools, automating issue detection and system health monitoring.
- Engineered a Go-based automation framework to streamline backend validation workflows.
- Delivered a custom MRI viewer system, reducing image load times by **90%**.
- Mentored junior engineers and led internal knowledge-sharing sessions on system design and cloud optimization.

**Beamlink Inc** — Remote
*Research & Development Engineer* — 03/2020 – 09/2021

- Designed disaster-resilient mesh network architectures using Python and OLSR protocol.
- Built simulation tools and automated network performance testing framework.

**Nissan Car Dealership** — Remote
*Lead Full Stack Developer* — 12/2020 – 03/2021

- Built a scalable dealership platform using Django (backend) and React (frontend).
- Integrated advanced analytics dashboards, Monday.com and chatbot features for customer engagement.

**Prior Experience**

- *Apprely Technologies* | Application Developer — 10/2016 – 06/2018
  Developed Android apps and backend services with Kafka/RabbitMQ integration.
- *Accenture Services Pvt Ltd* | Associate Software Engineer — 10/2015 – 10/2016
  Automated testing for Virgin Media UK, contributing to a 2-month manual effort reduction.

## Education

- **M.S. in Astronautical Engineering** | University of Southern California | 2020
- **B.E. in Electronics & Telecommunication Engineering** | MIT, University of Pune | 2015

## Certifications

Lean Six Sigma Green Belt | Monday.com Workflow Certifications

## Patents & Publications

- **Patent**: "Fixed Base Station Antenna System using MIMO Configuration" US20240129000A1
- **Publication**: "Space Situational Awareness through Blockchain Technology" - Journal of Space Safety Engineering
- **Research**: Decentralized Search Engine for Data Marketplace using IPFS