Swaraj Kumar

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Professional Summary

Designed and delivered production-grade backends with Node.js, Java, and ML integrations. Strong in system design, automation, and real-time data processing.

Skills

Languages: Java, JavaScript, Node.js, Python, C++, C
Backend Development: RESTful APIs, Express.js, Spring Boot, Microservices, Multi-tenant Architecture
Machine Learning / AI: Supervised Learning, Random Forest, OpenCV, scikit-learn, NLP, OCR, Object Detection
Data / DevOps Tools: MongoDB, PostgreSQL, Redis, SQL, Git, Docker, JWT, WebSockets
Security & Infra: RBAC, HTTPS, Encryption, Authentication, API Rate Limiting, Compliance
Other Skills: System Design, Crawlers, Real-time Pipelines, Dashboard Integration, Project Management

Experience

Backend Engineer (Core Team)   *Chennai Mar 2025 –*
Doc App – HealthTech Platform   *Present*

- Leading the end-to-end backend development of a multi-tenant healthcare platform with complex role-based access, real-time workflows, and financial integrations.
- Designed and implemented scalable backend architecture using Node.js, Sequelize, PostgreSQL, and REST APIs, optimized for performance, modularity, and security.
- Contributing beyond engineering — involved in system design reviews, technical roadmap planning, monetization strategy, compliance infrastructure, and investor-ready delivery.

Education

BE in Computer Science and Engineering   *2023 – 2027*
Sathyabama Institute of Science and Technology, Chennai
Intermediate (Science)   *2020 – 2022*
Vikash Residential School, 88%
Matriculation   *2010 – 2020*
St. Xavier's English School, 91.8%

Projects

Backend Developer — Drug Inventory & Chain Tracking System   *github.com/your-repo*

- Engineered the backend architecture for a scalable drug inventory and supply chain tracking platform, with modular interfaces for hospitals and vendors.
- Integrated supervised ML for real-time requirement forecasting and automated procurement pipelines.
- Developed expiry monitoring logic and dynamic vendor optimization based on pricing and availability.
- Designed RESTful APIs with secure auth and multi-tenant DB support.

Narcotics Threat Intelligence & Intervention Platform (NTIIP)   *Hackathon Project*

- Architected a modular cyber-intelligence system for tracking online drug trafficking via Telegram, Instagram, and WhatsApp.
- Built real-time crawlers, ingestion pipelines, and ML modules (NLP, OCR, object detection, graph analysis).
- Designed an analyst dashboard with legal workflows, risk scoring, and cross-platform evidence correlation.
- Ensured RBAC, encryption, and legal compliance; delivered a hackathon-ready MVP.

Seashell Health Detection Using Machine Learning   *Personal Research*

- Developed an ML model to classify seashell health (Healthy, Diseased, Dead) using color/texture features.
- Applied image preprocessing, HSV histograms, HOG, and color moments.
- Achieved 83% accuracy using Random Forest on a custom dataset.