Sanjai S

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SUMMARY

Full Stack Engineer with a strong track record in **architecting high-scale automation systems** and **secure enterprise platforms**. Experienced in optimizing **high-throughput workflows** handling **15,000+ users** and integrating **GenAI solutions**. Known for **end-to-end ownership**, from designing **robust backends** to delivering **intuitive user interfaces**.

EDUCATION

Indian Institute of Technology Bombay   **2019 – 2023**
B.S. in Chemistry   *CPI: 7.47*
Minor in Design (Industrial Design Centre)   *CPI: 7.60*

PROFESSIONAL EXPERIENCE

Software Engineer | Justdial (HR Automation Team)   **(Jan'24 – Present)**
- **GenAI HR Assistant (RAG):** Developing an intelligent chatbot using **Qwen** and **MCP (Model Context Protocol)**; orchestrated **tool calling** pipelines to automate **leave & attendance**, fetch **Form-16/Payslips**, and **instantly surface insurance limits & reimbursement guidelines** to eliminate manual policy search, featuring seamless **human-handoff** for referrals and escalations.
- **Candidate Onboarding System:** Engineered a high-throughput onboarding application handling **6,000+ monthly candidates**; implemented **Aadhar OTP validation** and optimized **MySQL** indexing, reducing data retrieval latency by **40%** under heavy load.
- **Leave Management System:** Spearheaded the full-stack development of a Leave Management System serving **15,000+ employees**; automated complex payroll and accrual calculations, achieving a **99.9% accuracy rate** in monthly processing.
- **Consultant Module:** Pioneered end-to-end development of the Consultant Module, crafting a **React.js** interface and directing **Node.js** microservices for streamlined external workforce management, improving consultant assignment rate by **85%**.
- **Security & Access Control:** Fortified application security by implementing **Role-Based Access Control (RBAC)** across modules and integrating **Vaults** for the encryption of sensitive PII data via secret keys, ensuring strict data compliance.

Full Stack Developer Intern | Skein Technologies Pvt. Ltd   **(May'22 – Jul'22)**
Mobile application services organization based in Coimbatore, India
- **Mobile App Development:** Designed and optimized user-friendly UI screens for the **PlayGroup** application using **Flutter**, collaborating with a 6-member team to ensure cross-platform compatibility and performance.
- **Backend Architecture:** Architected scalable **REST APIs** using **Node.js** and **MySQL** hosted on **AWS (EC2/RDS)**, and configured **Firebase** for real-time authentication and data synchronization.

KEY PROJECTS

PayDirect — Cross-Border Payment Platform
- Built a secure **Fintech Frontend** using **Next.js** and **Redux Toolkit**, while owning the system architecture for regulated **T+2 settlement** cycles and cross-border financial flows backed by **PostgreSQL** for strict ACID compliance.
- Deployed scalable **Node.js** services on **AWS ECS** integrated with **Cloudflare** for DDoS protection, and secured sensitive payment data using industry-standard **PGP encryption**, reducing security vulnerabilities by over **50%**.

GenAI Voice Agent for Sales Automation | Justdial Hackathon
- Developed an end-to-end Voice Bot using **OpenAI Whisper** for low-latency speech-to-text, **Llama 3.1** for natural language reasoning, and **High-Fidelity TTS** for synthesis, significantly reducing manual sales call volume by automating FAQ resolution.
- Built a real-time analytics dashboard using **React.js** to visualize conversation metrics, backed by a **Dockerized Node.js** and **MongoDB** infrastructure deployed on a private corporate server for data sovereignty.

Indian MMA Analytics & Management Platform
- Architecting a comprehensive "Tapology-style" ecosystem for Indian MMA using **React.js** and **Node.js/MySQL** to aggregate extensive fighter statistics, while implementing a specialized Event Management module for officials to log real-time bout scores.
- Establishing granular **RBAC** and **Identity Verification workflows** for the secure onboarding of fighters and promoters, alongside a centralized **event ticketing system** and **merchandising marketplace**.

Smart Biometric Access Control System | *IoT & Computer Vision*
- **Biometric Access Control:** Architecting a standalone security system using **Raspberry Pi** and **OpenCV**; developed a **Face Recognition Engine** with **Liveness Detection (Blink Analysis)** to prevent photo-based spoofing.
- **Hardware-Software Interface:** Devised a custom **GPIO control pipeline** in **Python** to trigger electronic door locks upon verified authentication, processing video frames in real-time without external cloud dependencies.

TECHNICAL SKILLS

- **Languages & Frameworks:** TypeScript, JavaScript, Python, C++, Dart, React.js, Next.js, Node.js, Express.js, Redux Toolkit.
- **Cloud, Databases & DevOps:** AWS (ECS, EC2, RDS, S3, Route53), Docker, MySQL, PostgreSQL, MongoDB, Firebase, GitHub.
- **AI, Security & Architecture:** GenAI (Llama 3, Qwen), RAG Pipelines, MCP, OpenCV (Computer Vision), IoT, RBAC, PGP Encryption.