

Sukhmani Chhabra

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PROFESSIONAL SUMMARY

Computer Science undergraduate with strong experience in backend development and full-stack application engineering. Skilled in building RESTful APIs, database design and optimization, and deploying scalable cloud-based applications.

EDUCATION

- **Indian Institute of Information Technology, Sri City** Aug 2023 - Present
Bachelor of Technology in Computer Science and Engineering; CGPA: 9.11
Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks, Object-Oriented Programming, Database Management Systems, Computer Architecture, Probability & Statistics.

TECHNICAL SKILLS

- **Languages:** Python, C++, JavaScript, TypeScript, SQL, Java, SQL, HTML5, CSS3
- **Frameworks:** FastAPI, Flask, Node.js, Express.js, React.js, Next.js, Apollo Server, TailwindCSS
- **Databases & Infrastructure:** MongoDB, PostgreSQL, Redis, MySQL, Prisma ORM, Apache Kafka, Docker
- **Tools & Cloud:** AWS (EC2, Lambda, MSK, S3), Git, Postman, Linux, Vercel, Socket.IO, WebRTC

EXPERIENCE

- **Zehntech Technologies** On-Site
Software Development Engineer Intern June 2025 - Aug 2025
 - Built and deployed scalable backend microservices for **Eikshana**, a real-time civic issue detection platform, supporting 1000+ concurrent video streams.
 - Designed 15+ RESTful APIs and optimized database schemas; integrated **YOLOv8** with a Node.js backend to process live video streams and auto-generate incident tickets, reducing issue resolution latency by ~30%.
 - Contributed to **Mylivecart**, a live-streaming e-commerce platform, by developing live chat and Q&A functionality to enable real-time customer interaction.

PROJECTS

Nutrify

An AI-native nutrition and fitness platform with agentic workflows and distributed cloud infrastructure

- Architected a full-stack wellness platform using **FastAPI**, **React 18**, **MongoDB Atlas**, and **Docker**, delivering personalized nutrition coaching, meal tracking, workout management, and progress analytics.
- Implemented an **MCP-powered agent framework** exposing 20+ specialized tools for nutrition estimation, meal planning, hydration tracking, workout generation, goal monitoring, and real-time web-assisted recommendations.
- Deployed a distributed **microservice ecosystem** across **Oracle Cloud VMs** with **Redis**, **Celery**, **SSE streaming**, and **Azure OpenAI**, supporting automated workflows, scheduled report generation, and low-latency conversational AI experiences.

Queuegate

A real-time virtual queueing and fair-admission platform for high-demand ticket sales

- Engineered a full-stack real-time **Queueing Platform** using Next.js, NestJS, PostgreSQL, and Docker, delivering fair FIFO admission, live queue position/ETA tracking, and merchant analytics dashboards.
- Orchestrated a race-free admission engine with Redis sorted sets, custom Lua scripts, and distributed locking, admitting users at a merchant-defined rate on 2-second ticks without ever over-selling event capacity.
- Instrumented the platform with **Prometheus** and **Grafana** for real-time queue monitoring, while BullMQ, Kafka, and fail-open Redis guards kept checkout resilient during outages.

Feasto

A hyper-local food delivery marketplace connecting Customers, Restaurants, and Riders

- Split the platform into 11 independently deployable **Node.js** services stitched together over **Kafka**, where atomic database updates settle rider-assignment races and a **Redis** pub/sub layer keeps live GPS tracking in sync across every replica.
- Locked down the platform with a gateway that centralizes auth and brute-force limits, background jobs that catch abandoned or stalled orders and refund them through **Razorpay**, and a **Mapbox** layer for routing and geocoding then wired it all into a containerized **CI/CD** pipeline across 4 **Oracle Cloud VMs**.

ACHIEVEMENTS & LEADERSHIP

- Selected for **Amazon ML Summer School 2026**, Amazon India's flagship machine learning program.
- Co authored and presented at **IEEE CONECCT 2026** for “**A Potential-Field Guided Chaotic Opposition-Based Sparrow Search Algorithm for Global Optimization**”; also co authored “**Dual-Architecture Next-Generation Whale Optimization: TITAN and ATLAS Frameworks for Dynamic Multivehicle IoV Path Planning**.”, accepted at ICIIS 2026
- **Domain Lead at Epoch (ML Club, IIIT Sri City):** Mentored 50+ students in neural network architectures while engineering low-latency backend REST APIs for predictive ML models.
- **Core Member, Enigma (Cyber Security Club):** Led technical sessions on C-based threading and designed synchronization-intensive distributed systems using mutexes and semaphores.
- **Core Member, Google Developer Groups (GDG IIIT Sri City):** Spearheaded a “Women in Tech” session and co-organized a community-wide hackathon to drive inclusive technical engagement.
- Secured **2nd Runner Up** in the AgriAI Hackathon (Abhisarga'25) organized by IOTA IIIT Sri City.