

Harshil Malhotra

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EDUCATION

SRM Institute of Science and Technology

B.Tech in Computer Science Engineering — **CGPA: 9.76/10**

Chennai, Tamil Nadu

May 2023 – May 2027

Relevant Coursework: Data Structures, Algorithms, Operating Systems, Database Management Systems, Computer Networks

EXPERIENCE

Software Development Engineer Intern

June 2025 – July 2025

Bajaj Finserv Health Limited

Pune

- Built and shipped a production Progressive Web App (PWA) for contactless health screening using device camera input, enabling real-time wellness assessment in under 30 seconds without wearables or external devices.
- Implemented camera-based face scan pipelines including face detection, calibration, and signal extraction, integrating backend services to compute and surface 25+ health markers such as wellness score, cardiovascular, metabolic, and stress indicators.
- Designed and implemented low-latency REST APIs (< 300ms P95) to aggregate CV inference results, enabling real-time risk flagging and personalized insights for end users.
- Containerized backend services using Docker and deployed on Microsoft Azure with CI/CD pipelines, improving deployment reliability and enabling rapid feature iteration.
- Worked with product and ML teams to translate experimental CV pipelines into production-ready services, adding validation, error handling, and monitoring to meet reliability SLAs.

Artificial Intelligence / Machine Learning Intern

June 2024 – July 2024

Indian Institute of Technology, Mandi

Mandi

- Built an LSTM–Autoencoder pipeline for time-series anomaly detection, improving F1 score from 0.78 to 0.90 through feature engineering and noise filtering.
- Optimized inference and preprocessing pipelines, reducing latency by 20% and improving throughput by 40%.

PROJECTS

Context-Aware Telegram Personal Assistant (Memvix) | PostgreSQL, Redis, SQLAlchemy, Docker, Oracle Cloud, Workers

- Built a cloud-hosted assistant supporting natural-language and voice-based reminders with timezone-aware scheduling.
- Developed a custom async scheduling system with retries, snoozing, and failure recovery using Redis-backed workers.
- Handled edge cases such as daylight saving transitions, worker crashes, and duplicate scheduling through idempotent APIs and retry-safe task execution.
- Deployed a Dockerized FastAPI backend on Oracle Cloud, focusing on reliability, scalability, and clean system design.
- Live Demo [Telegram Bot](#) [GitHub](#)

FitSync – AI Powered Fitness Tracker | MediaPipe Pose, WebRTC, Node.js, Supabase, Next.js

- Created posture and motion tracker (MediaPipe + WebRTC) with 200 ms latency for real-time user correction.
- Designed scalable Supabase backend supporting 500+ concurrent users and implemented REST APIs in Node.js.
- Gamified platform with leaderboards and challenges, increasing user retention by 20 percent.
- Maintained high code quality using Jest unit tests and automated pipelines with GitHub Actions CI.
- Live Demo [GitHub](#)

TECHNICAL SKILLS

Languages: C, C++, Python, JavaScript

Core CS: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Linux, SQL

Backend & Web: Node.js, Express.js, FastAPI, React.js, Next.js, Tailwind CSS

Databases: PostgreSQL, MongoDB, Supabase

Cloud & DevOps: Docker, CI/CD, GitHub Actions, Kubernetes, AWS (EC2, S3, Lambda), Azure

AI/ML (Working Knowledge): TensorFlow, PyTorch, Scikit-learn, OpenCV, MediaPipe

CERTIFICATIONS

- **GitHub Foundations** — GitHub (*Credential*)
- **Certified Agentforce Specialist** — Salesforce (*Credential*)