

Dharm Singh Dagar

dharm31503@gmail.com | +91-8209990596 | portfolio-dharm.vercel.app | github.com/Dharm-dagar | linkedin.com/in/dharm-singh-dagar

SKILLS

Languages: C++, Python, Java, SQL, JavaScript, C, Go

Data & Pipeline: MySQL, MongoDB, SQLite, PostgreSQL, ChromaDB

Backend & APIs: Node.js, Express.js, FastAPI, Flask, REST APIs, API-Driven Interfaces

Frontend: React.js, AngularJS, Next.js, Vite, Tailwind CSS, Redux, HTML5, CSS3

AI / ML: LLM Integration (Ollama, Claude API), Generative AI, RAG, MCP Tools, Computer Vision (YOLO, SAM), NLP, Vector Embeddings & Semantic Search, Anomaly Detection, PyTorch, TensorFlow, scikit-learn, XGBoost, Jupyter Notebook

Testing & OS: Jest, Cypress, API Testing, Linux

Concepts & Tools: DSA, OOP, Distributed Systems, System Design, DevOps, CI/CD (GitHub Actions), GitHub, Git, Docker, Kubernetes, AWS

WORK EXPERIENCE

Xelron AI, Remote

Jan 2026 – June 2026

Software Developer Intern

- Built an AIOps-style Multi-Agent AI Copilot MCP Server (JSON-RPC 2.0 compliant) enabling automated debugging, repository analysis, and workflow orchestration across source code, logs, and GitHub systems.
- Architected a 3-agent framework (Planner, Executor, Critic) with async tool execution and session-based memory for structured task decomposition and automated output validation.
- Implemented a custom vector store (TF-IDF + Ollama embedding similarity) for RAG-based semantic context retrieval, integrated across 10 MCP tools for repo parsing, PR/issue analysis, and log diagnostics.
- Performed root cause analysis and issue detection across 250+ structured logs and alerts using anomaly-detection heuristics surfaced through an LLM-powered (Ollama/Llama3) monitoring pipeline, improving overall system visibility.

Coder Edge Technology, Remote

May 2025 – Jul 2025

Software Developer Intern

- Developed a real-time Car Scratch & Dent Detection System (YOLO-SEG + YOLO + SAM) achieving 90%+ accuracy and sub-100ms inference latency.
- Created a modular vision pipeline and embedded annotated outputs into a React + TypeScript dashboard, reducing manual inspection effort by 75% and improving real-time visibility into detection results.

EDUCATION

Indian Institute of Information Technology, Vadodara

Nov 2022 – May 2026

B.Tech in Computer Science and Engineering — Vadodara, Gujarat

Relevant Coursework: Operating Systems, Data Structures & Algorithms, Computer Networks, DBMS, OOP, Cybersecurity

PROJECT WORK

Virtual Cosmos – Real-Time Multiplayer Environment (Mar 2026) [\[GitHub\]](#)

React, Vite, PixiJS (WebGL), Socket.IO, MediaStream/MediaRecorder APIs, Node.js, Express, Tailwind CSS

- Built a real-time 2D virtual world with WebGL rendering (PixiJS v7) at 60fps, WASD movement with diagonal normalization, and world-boundary clamping.
- Implemented proximity-based auto-connect chat (150px radius) with group and direct messaging; throttled position sync to 25 updates/sec via Socket.IO with lerp interpolation.
- Added live mic/camera controls with video preview, in-browser audio/video session recording (WebM export), hand-raise, and emoji reactions.

Google Sheets ↔ MySQL Data Pipeline & Sync Engine (Jan 2026) [\[GitHub\]](#)

Node.js, JavaScript (ES6+), MySQL, Redis, Bull, WebSocket, Google OAuth 2.0

- Engineered a bidirectional sync engine between Google Sheets and MySQL using vector clocks and last-write-wins conflict resolution, with a REST API and live WebSocket monitoring dashboard.
- Assembled a queue-based automation pipeline (Bull + Redis) with retry, backoff, and dead-letter queues; added MySQL triggers for change capture across 10,000+ rows and batched, rate-limited Sheets API writes.
- Documented and resolved 52 edge cases (schema evolution, concurrent edits, token refresh, rate limiting) with zero data loss.

HONORS AND AWARDS

- Runner-up – Odoo Hackathon: Developed SkillSwap, a MERN stack peer-to-peer skill exchange platform with real-time chat (Socket.IO), Google OAuth 2.0 + JWT security, and Dockerized deployment.
- Finalist – Adobe India Hackathon 2025: Built an AI-powered intelligent document understanding & semantic linking engine with contextual recommendations and insight generation.
- 400+ LeetCode Problems Solved (C++): Strong DSA proficiency | CodeChef 3* (Rating 1615, Div 2).
- Google Cloud Skills Boost – GCP Infrastructure, IAM, Kubernetes | NVIDIA Certified – Deep Learning (CNN workflows).