

Arjun Singh

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EDUCATION

Thapar Institute of Engineering and Technology
B.Tech in Computer Science & Engineering CGPA: 8.79

Patiala, Punjab, India
2023–2027

Blue Birds International School
Class 10: 95% - Class 12: 96%

Dhanaura, Uttar Pradesh, India
2020–2022

PROJECTS

JeevanSetu: AI-Assisted Emergency Triage & Hospital Referral Platform

[Link](#)

Next.js, Node.js, Neo4j, AWS ECS, Docker, LangChain, Gemini, WebSocket

- Architected a **full-stack GenAI platform** (Next.js + Node.js) with a multi-agent **LangChain + Gemini** pipeline for automated clinical triage, achieving **85%+** acceptance rate via **RAG**-grounded decision-making.
- Built a **Web Speech API voice intake** system with backend LLM parsing, cutting onboarding time by **70%** (**3 min** → **45 sec**), and deployed **Dockerized** microservices on **AWS ECS** with **Neo4j** for hospital routing, cutting transfer time by **40%**.

Kumo: Cloud IDE Platform

[Link](#)

React, TypeScript, Express, Docker, Docker Compose, Traefik, BullMQ, Redis, AWS S3

- Architected a **full-stack cloud IDE platform** (React + TypeScript + Express) provisioning isolated **code-server** workspaces in **Docker** containers, with per-user create/start/stop/resume/delete lifecycle management across a **microservices** architecture (API, Worker, Frontend, **Traefik** reverse proxy) orchestrated via **Docker Compose** with per-workspace **CPU/memory quotas**.
- Designed an **asynchronous job pipeline** (**BullMQ + Redis**) for non-blocking container provisioning and idle-timeout enforcement, and implemented workspace persistence via a **Docker volume + AWS S3** archive strategy, snapshotting state on stop/idle and restoring on start to tolerate instance restarts.

Thapar Hostel: Leave, Attendance & Records Management System

[Link](#)

Node.js, Express.js, Prisma, PostgreSQL, JWT, AWS EC2, Vercel, GitHub Actions

- Backend Development:** Built a **REST API** using **Node.js, Express.js, Prisma, and PostgreSQL** to manage student accounts, leave approvals, attendance logging, and secure **CSV** data exports, verified via **Postman** test suites.
- Database & Auth:** Designed the database schema with relational keys, implemented atomic query updates, and configured **JWT** authentication with header and query-parameter fallback support.
- CI/CD & Deployment:** Built an automated **CI/CD pipeline** with **GitHub Actions** to **AWS EC2** (backend) and **Vercel** (frontend), managing production services using **PM2, Nginx**, and **SSL** certification via **Certbot**.

SKILLS

Languages:	C, C++, JavaScript, TypeScript, SQL, HTML, CSS
Frameworks:	React, Node.js, Express, Tailwind
Libraries/Tools:	Prisma, Websockets, Recoil, Git, GitHub, Postman, Nginx
Databases:	MongoDB, PostgreSQL, Redis
Cloud/DevOps:	Docker, AWS (ECS, EC2, ALB, Lambda, IAM, S3, Cloudfront), Vercel, CI/CD (GitHub Actions)
Subjects:	OOPS, DBMS, Computer Networks, Operating Systems

EXPERIENCE

Core Member, Google Developer Student Club (GDSC)

July 2024

- Conducted hands-on workshops on backend development and DSA for **50+ students**.
- Organized a campus-wide hackathon attracting **150+ participants**.
- Contributed to the official GDSC TIET website serving **1000+ visitors**.

CODING PROFILES & ACHIEVEMENTS

- Achieved **Knight** rank on LeetCode by consistently solving data structures and algorithms problems
- Attained **Pupil** rating on Codeforces through active participation in competitive programming contests
- Reached **2 Star** rating on CodeChef by regularly competing in rated coding challenges
- Awarded the **TIET Merit Scholarship** in recognition of outstanding academic excellence (*2023–24*)