

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

Cloud Workspace Platform

[Link](#)

React, TypeScript, Prisma, Redis, Docker, Traefik, PostgreSQL, AWS S3

- Architected a **multi-service cloud IDE platform** where users can create, start, stop, and resume isolated coding workspaces backed by **Docker** containers (**code-server**), persistent volumes and idle-timeout auto-stop via **BullMQ** job queues.
- Built **workspace archive sync** to **AWS S3** for persistence across container lifecycles; configured **Traefik** as a reverse proxy for cross-service routing with user-level isolation.

RecruitSage Copilot : Chrome Extension

[Link](#)

Python, JavaScript, FastAPI, Gemini API, Ollama (Qwen), RAG, Multi-Agent Systems, LLMs

- Built a **Chrome extension** that scrapes placement-portal postings and runs a **multi-agent pipeline** (Campus Intel, Web Search, Alumni agents in parallel) to generate a prep guide covering eligibility, skills, and interview questions.
- Used **RAG** over **1,400+** real campus interview questions, filtered by company and round, to reduce hallucinations.
- Aggregated **Glassdoor**, **AmbitionBox**, and **LinkedIn** alumni insights via a **DuckDuckGo** search agent.
- Added **last-year placement analytics** per company (students selected, CGPA cutoff, roles, branches allowed) from structured campus data.
- Built a **hybrid LLM router** supporting **Gemini API** (cloud) and **Ollama/Qwen** (local, offline) with **streamed responses** behind one API interface.
- Built an in-extension **AI chat panel** with portal context injected into the system prompt to reduce hallucinations.

Thapar Hostel: Leave, Attendance & Records Management System

[Live](#) — [GitHub](#)

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 **CSV** data exports.
- **Database & Auth:** Designed the database schema with relational keys, implemented atomic query updates, and configured **JWT** authentication.
- **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 **TLS** certification via **Certbot**.

SKILLS

Languages: C, C++, Python, JavaScript, TypeScript, SQL, HTML, CSS

Frameworks: React, Node.js, Express, FastAPI, Tailwind

Libraries/Tools: Prisma, Websockets, Recoil, Chrome Extensions, Gemini API, Ollama, RAG, Multi-Agent Systems, LLMs,

Databases: MongoDB, PostgreSQL, Redis, Pinecone (Vector DB)

Cloud/DevOps: Docker, AWS (ECS, EC2, ALB, Lambda, IAM, S3, CloudFront), Vercel, CI/CD (GitHub Actions)

Subjects: OOPS, DBMS, Computer Networks, Operating Systems, System Design

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)