PRAJJWAL RAWAT

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SUMMARY

Computer Science undergraduate with a strong foundation in data structures, algorithms, OOP, and backend systems. Built scalable, low-latency applications using C++, Python, TypeScript, Node.js, and FastAPI, including a sub-30ms fraud detection system. Experienced in designing REST APIs, real-time systems, databases, and fault-tolerant applications, with hands-on experience integrating ML and AI-driven features. Seeking a software engineering internship focused on building scalable, reliable, and high-performance systems.

EDUCATION

Bachelor of Technology, (Computer Science), SRM University, Kattankulathur — 2023 - Present
9.37/10.0 GPA

High School, Summer Valley School — 2009 - 2023
95% in 12th grade (ISC)

SKILLS

Languages	C++, Python, Java, TypeScript, JavaScript, SQL
Core	Data Structures & Algorithms, OOP, DBMS, Operating Systems, Computer Networks
Backend	Node.js, Express.js, FastAPI, REST APIs, WebSockets
Databases	PostgreSQL, MongoDB, MySQL, Redis, Neo4j, Prisma ORM
Frontend	React.js, Next.js, HTML, CSS, Tailwind CSS
Tools	Git, GitHub, Docker, Postman, VS Code

EXPERIENCE

Intern, DEAL-DRDO — May 2025 – July 2025
Dehradun

- Designed and implemented a **graph-based backend system** using Neo4j to analyze relationships across **500+ entities**, improving query efficiency and data discoverability.
- Worked on a **UDP-based file transfer system** under **bandwidth constraints (100 kbps)**, improving reliability by handling packet loss and optimizing data transmission mechanisms.

PROJECTS

Real-Time Fraud Detection & Risk Scoring System — Jan 2026
React • Node.js • FastAPI • MongoDB • Redis • scikit-learn • Socket.IO

Built a **fraud detection system** for UPI-style transactions using a **hybrid ML + rule-based engine** (Isolation Forest on **9 behavioral features** + **5 fraud rules**). Delivered **sub-30ms end-to-end scoring** with real-time dashboard updates via **Socket.IO**. Added **explainability** by surfacing key risk factors per decision and ensured reliability through **Redis fallback** and **ML failure recovery**. GitHub

Graph-Based Data Exploration Platform — June 2025
Neo4j • Node.js • React • Selenium

Developed a **full-stack graph-based web application** to query and visualize relationships across **500+ interconnected entities**. Designed **RESTful APIs** and automated **data ingestion pipelines** to convert unstructured data into Neo4j graph formats. Created **interactive, high-performance visualizations** using React and D3.js for real-time exploration. GitHub

DebateForge — Real-Time AI Debate Platform — Feb 2026
Next.js • FastAPI • Ollama • LLaMA 3.2 • TypeScript • Web Speech API

Engineered a **full-stack AI debate system** enabling real-time multi-agent argument generation with **near-zero latency transitions**. Designed a **prefetch-based pipeline** overlapping inference and speech, reducing response delay by **30%**. Optimized local LLM performance using **context reduction (4096→2048), warmup, and keepalive**, improving token speed by **15%** and eliminating cold starts. Integrated a **human-in-the-loop system** with fallacy detection and argument reconstruction for uninterrupted debate flow. GitHub

CERTIFICATIONS & HONORS

Winner, Pentathon 2.0 Datathon Certificate

GitHub Foundations Credential