RAJAT SARASWAT

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Education

Bachelor of Technology | CSE

Indian Institute of Technology, Madras | 2022–2026

Bachelor of Science | Data Science

Indian Institute of Technology, Madras | 2024-2027

Experience

Brilliant.org

Software Intern | Remote | Mar 2025 - Aug 2025

- Integrated designer assets with Rive & Diagrammar, configuring state machines for high-fidelity production animations.
- Ensured 100% cross-platform fidelity of animations across Chrome, Safari, iOS, and Android, delivering a consistent experience for 3M+ learners.
- Built reusable interactive components (graph animations, vector updates) and enhanced the Elm + SVG/Canvas framework, improving lesson reusability by 40% and reducing rendering overhead by 25%.

Smart Grid Analytics

Software Development Intern | Bengaluru | May 2024 - Nov 2024

- Led Atheneum team to build a multi-tenant onboarding platform for renewable-energy providers, enabling seamless customer integration.
- Developed a low-code analytics dashboard builder with reusable widgets, cutting dashboard production time by 60% across clients.
- Rebuilt landing pages with Next.js (migrated from Angular), improving SEO and increasing organic traffic by 25%.
- Contributed to a patented Digital Twin system for solar plants that reduced DSM penalties by 20-40% in production.

8th Light

Software Developer | Remote | Mar 2024 - May 2024

- Collaborated with **GENDEX healthcare donations team** to deliver a new interface, enabling **3 successful donation** campaigns with improved reliability and user experience.
- Architected and implemented backend APIs with Swagger documentation and Razorpay integration, enabling secure and robust transaction gateways and optimizing data flow for faster donation processing.

DRDO, Centre for AI & Robotics

Machine Learning Intern | Bengaluru | Jan 2024 - Feb 2024

- Optimized integration of ML and CV algorithms (ORB-SLAM2, EKF, OpenCV) into autonomous drone navigation, achieving reliable GPS-denied flight and improving path accuracy by ~95% in simulation.
- Developed and validated algorithms for multi-drone coordination (leader-follower formations, collision avoidance) in Gazebo/AirSim, enabling swarm drones to navigate dynamic environments without collisions.

Projects

MeshSpire

(Node.js, Express, React, NextJS, Tailwind, PostgreSQL, Prisma, WebRTC, Razorpay, AWS, Nginx)

- Built a scalable MERN platform with chat, video calls, and payments, enabling instant tutor-student connections.
- Onboarded 8 tutors and 33 students, validating real-world adoption with live sessions powered by real-time
 messaging and video streaming.

InfinityX (Node.js, Express, SocketIO, BullMQ, Redis, React, Redux, NextJS, Tailwind, PostgreSQL, Prisma, AWS)

- Built an end-to-end workflow orchestration system with drag-and-drop designer, custom widgets, RBAC, and timedependent execution.
- Integrated cross-team services and added analytics/reporting, improving process visibility via elastic-search.

Skills

- Languages: JavaScript (ES6+), TypeScript, Python, C/C++, Java, SQL
- Frameworks: React, Redux, Next.js, Tailwind, Node.js, Express, Django, NestJS, Angular
- DataBase & DevOps: PostgreSQL, MongoDB, Redis, GraphQL, AWS (EC2/S3/Route 53), Docker, Kafka, Nginx, Git

Leadership & Achievements

Content Manager | TechSoc : Managed the content ecosystem for college tech. society

4star CodeChef (Max rating 1864): solved 500+ algorithmic problems across platforms

All India Rank 68 | JEE Advanced : Achieved All India Rank of 68 in Joint Entrance Exam