

# 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.

### 8<sup>th</sup> 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 time-dependent 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