

# Rajat Kumar Singh

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## EDUCATION

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|--------------------|--|------------|
| <b>2023 – 2027</b> | B.Tech. CSE, SRM University, AP (100% Merit Scholarship) | CGPA: 9.23 |
| <b>2021 – 2023</b> | Higher Secondary (CBSE), VidyaGyan School                | 88.4%      |
| <b>2019 – 2021</b> | Secondary (CBSE), VidyaGyan School                       | 94.5%      |

## PROFESSIONAL EXPERIENCE

**GeniScience Education Pvt Ltd** — Full-Stack Developer Intern *June 2025 – Aug 2025*

- Developed a complete e-commerce platform for STEM education kits using PHP, MySQL, and responsive web technologies, handling product catalog, user management, and order processing.
- Implemented secure authentication, shopping cart, admin dashboard, and mobile-responsive design with structured CSS architecture, improving user experience and maintainability.
- Designed optimized database schema with proper relationships and security measures (password hashing, form validation), ensuring data integrity and security.

## TECHNICAL SKILLS

|                     |   |
|---------------------|---|
| <b>Languages:</b>   | Python, JavaScript (ES6+), C/C++, Java (Learning), PHP, SQL, HTML5/CSS3 |
| <b>Frameworks:</b>  | React.js, Node.js, Express.js, Tailwind CSS, Bootstrap                  |
| <b>Databases:</b>   | MongoDB, MySQL  |
| <b>Tools:</b>       | Git, GitHub, Firebase, Linux/Unix                                       |
| <b>Embedded:</b>    | Arduino, Raspberry Pi, ESP32  |
| <b>Engineering:</b> | Data Structures & Algorithms, REST APIs, Software Design Principles     |

## TECHNICAL PROJECTS

**NEXi: University Voice AI Assistant** (Python, LiveKit, RAG) *(GitHub)*

- Created an intelligent voice assistant for university students, providing instant answers about policies, events, and faculty through real-time, natural language conversations.
- Used a dual RAG (Retrieval-Augmented Generation) system with a smart query router that automatically selects the correct data source—either university documents (PDFs) or structured data (JSON)—to ensure contextual accuracy.
- Built the complete real-time voice pipeline using LiveKit for communication, Deepgram for speech-to-text, and LangChain to orchestrate the Gemini LLM with a ChromaDB vector database.

**RunDown: AI Task Manager** (Flask, Azure OpenAI, Microsoft Graph API) *(GitHub)*

- Engineered an AI task manager to auto-extract events from Outlook emails, categorize them using custom user-defined labels, and provide preference-based filtering.
- Secured the application with OAuth 2.0 and integrated seamless Outlook Calendar synchronization for cross-device reminders and task management via natural language commands.

**Calmify: AI-Powered Mental Health Platform** (React, Node.js, PostgreSQL) *(GitHub)*

- Built a mental health platform with an AI-powered triage chatbot that assesses user needs using screening tools (PHQ-9, GAD-7) to direct them to the appropriate level of care.
- Developed a secure, anonymous support system featuring end-to-end encrypted chat, a crisis alert "Urgent Button," and a multilingual resource library for coping strategies.
- Implemented the full-stack architecture using a React front-end and Node.js back-end, MongoDB as database with strict role-based access control to guarantee user privacy.

## COMMUNITY INVOLVEMENT

**Next Tech Lab, AP** — Syndicate *Aug 2025 – Present*

- Actively contributing to a QS-ranked, student-led R&D lab, leading initiatives in the Internet of Things (IoT) division.
- Collaborating with peers and mentors to develop innovative IoT solutions, prototypes, and proof-of-concept projects.
- Mentoring junior members and helping organize technical workshops and hackathons for hands-on learning experiences.

## ACHIEVEMENTS

- **Winner** - Microsoft Student Community Hackathon: Developed *Medical Vault*, a secure app to store, organize, and share medical records.
- **Winner** - Secure X Hackathon (International): Developed SecureOps extension under the "Response and Mitigation" challenge in under 24 hours.
- **Winner** - 9Hacks Hackathon: Designed and implemented an IoT-based lab entry/exit management system with ESP32 and RFID sensors, while mentoring junior members.
- **SRM University AP (Top 5%)**: Awarded 100% merit scholarship, securing the honor among 2 lakh students in SRMJEE Examination.