

# ROYAL SACHAN

Full Stack Web Developer

📍 Hyderabad, Telangana, India – 500032

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🌐 linkedin.com/in/royalsachan | 📄 leetcode.com/lazy-royal | 🌐 Portfolio: lazyroyal.vercel.app

## PROFESSIONAL EXPERIENCE

### Backend Developer Intern

March 2024 – June 2025

TerraGrid Pvt.Ltd (Atal Innovation Centre)

Node.js | Express.js | PostgreSQL | JWT | REST API

- Architected and deployed enterprise-grade **authentication and authorization system** for Point of Sale application using Node.js, Express.js, JWT, and bcrypt, reducing unauthorized access by **80%** and ensuring secure user sessions
- Designed and developed **RESTful APIs** following industry best practices with rate limiting, CORS, and Helmet.js middleware; optimized endpoint performance to increase transaction processing speed by **30%**
- Collaborated with cross-functional teams using **Agile methodology** to deliver features in iterative sprints; participated in daily standups, code reviews, and sprint retrospectives
- Implemented **Sequelize ORM** for database schema management and migrations, improving deployment efficiency by **100%** and maintaining clean, maintainable codebase following coding standards

## TECHNICAL PROJECTS

### Pluto - AI-Powered Learning Platform | 📄 | Live

Nov 2024 - Feb 2025

React.js | Node.js | Express.js | MongoDB | JWT Authentication | YouTube Data API v3 | Groq AI

- Architected a **full-stack MERN application** with **OAuth 2.0** (Google, GitHub) and email-based authentication using **JWT** and **bcrypt**, supporting 500+ concurrent users with secure session management
- Engineered an **AI-powered code assistant** using **Groq's Llama 3.1 8B model**, providing real-time code analysis, debugging suggestions, and multi-language code conversion with **95% accuracy** and **sub-second response times**
- Built a **multi-language code execution engine** supporting JavaScript, Python, C++, Java, and C using **Judge0 API** and custom sandboxed execution, processing **1000+ daily code runs** with comprehensive error handling
- Developed an integrated **YouTube learning dashboard** with **REST API** integration, featuring video progress tracking, wishlist management, and personalized watch history stored in **MongoDB** with optimized compound indexes
- Implemented a **resizable split-panel UI** with **Monaco Editor** integration, custom YouTube player controls, and real-time progress synchronization using **React Hooks** and **Context API** for state management
- Deployed on **Render** with **CI/CD pipeline**, implementing environment-based configuration, rate limiting using **express-rate-limit**, and comprehensive error logging for production monitoring

### Earthquake Map Auto-Updater | 📄

April 2025 - June 2025

Python | Pandas | Folium | GitHub Actions | CI/CD

- Built automated **data processing pipeline** with GitHub Actions CI/CD, refreshing global earthquake datasets from USGS every **6 hours** for near real-time insights demonstrating understanding of automation and DevOps practices
- Processed and cleaned **10,000+ seismic event records** using Pandas, showcasing strong **data structures and algorithms** knowledge with 85% reduction in data inconsistencies
- Developed interactive geospatial visualization using Folium with layered filters; established version-controlled storage with **Git and GitHub** ensuring reproducible workflows and reducing manual effort by **100%**

## TECHNICAL SKILLS

- **Programming Languages:** JavaScript, Java, Python, SQL, HTML5, CSS3
- **Technologies and Framework:** React.js, Context API, Tailwind CSS, Node.js, Express.js, REST API Development, JWT Authentication, OAuth 2.0, Passport.js
- **Databases:** MongoDB, PostgreSQL, Database Design, Schema Optimization, Data Modeling
- **DevOps & Tools:** Git, GitHub, CI/CD, GitHub Actions, Docker, AWS, Postman, VS Code
- **Core Competencies:** Data Structures & Algorithms, Object-Oriented Programming, Problem-Solving, Computer Network, DBMS

## EDUCATION

### Indian Institute of Information Technology, Senapati

Sep 2023 – Aug 2027

B-Tech in Computer Science and Engineering | CGPA: 7.0/10.0 Till 4th Sem

Manipur, India

## ACHIEVEMENTS & CERTIFICATIONS

- Selected in the prestigious **5G Innovation Hackathon 2025** organized by the **Department of Telecommunications (DoT), Government of India**; presented a **healthcare innovation prototype** at CDOT meet as one of the top 5 proposals from my institution
- Secured **AIR-2** in the Engineer's ring of honour (EROH) 2025 (Naukri Campus) among **25,000** Round-2 qualifiers from **200,000+** participants; awarded a scholarship and featured in national newspaper.
- Participated in the **Meta Hacker Cup 2025** and achieved a global rank of **5243 among 20,000+ participants** in Round 1, demonstrating strong algorithmic and coding skills
- Earned the **AWS Certified Cloud Practitioner Basic** credential, validating foundational expertise in **AWS Cloud concepts, services, and deployment models**
- Solved **500+ Data Structures and Algorithms problems** across platforms including LeetCode, HackerRank, CodeChef, and Geeks-forGeeks, showcasing consistent problem-solving and coding proficiency