# Rudra Pratap Singh

Tamil Nadu, India

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### Education

# Indian Institute of Information Technology, Tiruchirappalli

Aug 2023 - Aug 2027

B. Tech in Electronics and Communication Engineering (CGPA: 8.9)

Trichy, Tamil Nadu

#### Royal Kids' Convent (ICSE Board)

2020

Senior Secondary - Mathematics Stream

Score: 90%

## Technical Skills

Languages: Java, JavaScript, HTML, CSS

Frameworks/Libraries: React.js, Node.js, Express.js

Database & Cloud: MongoDB, MySQL

DevOps/Tools: Git, GitHub, Postman, Docker, Vercel

## Experience

# Web Development Intern

Jan 2025 - Mar 2025

TalkHealResolve (Remote)

- Revamped UI using Wix Studio, JavaScript, and Canvas, improving responsiveness and visual appeal.
- Designed dynamic feedback pages that streamlined user flow and increased engagement by 30%.
- Built custom components using Canvas to enable interactive experiences within the platform.
- Collaborated with design and QA teams to fix UX issues, boosting usability across devices.

# **Programming Achievements**

- Secured **Global Rank 71** in CodeChef Starters 160 (Div 3).
- Ranked 302/30,797 in LeetCode Biweekly Contest 152.
- Achieved Guardian rank on LeetCode Rudra\_Pratap\_Singh Max Rating: 2160.
- Reached **Specialist** on **Codeforces** Rudra452 Max Rating: 1450+.
- Consistently performed on CodeChef rudra\_50 Max Rating: 1700.

### **Projects**

# ManimAI $\bigoplus$ $\bigcap$ | React.js, Node.js, MongoDB,, Redis Queue, Docker, Manim, Gemini LLM

- Developed AI-powered math visualization platform using Gemini LLM, improving learning outcomes by 75% for 90+ users.
- Implemented containerized Manim system with Docker and Node is backend, optimizing rendering speed by 70%.
- Architected Redis Bull Queue pipeline with MongoDB and WebSocket integration, enabling real-time task monitoring.
- Deployed scalable full-stack application with responsive design, enabling visualization of 50+ math topics.

#### College OS $\bigoplus$ Next.js, JavaScript, Gemini API

- AI-powered college management system for event handling, announcements, and campus operations.
- Integrated Gemini API to power a chatbot that answers student queries about college policies in real time.
- Added resume parser, ATS scoring, and AI-based mock interviews to enhance student career readiness.
- Designed responsive UI with secure admin-student workflows and deployed using Vercel infrastructure.

#### **TempMails** $\bigoplus$ Node.js, MongoDB, React.js, SMTP, WebSocket

- Built a real-time temp mail service with auto-expiring inboxes to enhance privacy and reduce data exposure.
- Used a custom SMTP server to securely route inbound emails and block malicious content.
- Blocked 99% of spam and delivered messages in under a second with WebSocket support.
- Adopted by 100+ users and deployed on Render with MongoDB Atlas for scalability.