



Rupanjan De

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Area of Interest

Web Development, DSA, Problem Solving

Education

Year	Degree	Institute	CGPA / Percentage
2023 - 2027	B.Tech (Chemical Engineering)	Indian Institute of Technology, Roorkee	7.818
2022	Intermediate (Science)	Netaji Shubhas Vidyaniketan, Agartala	93.20 %
2020	Matriculation	Netaji Shubhas Vidyaniketan, Agartala	94.60 %

Projects

Data Compression and Decompression Portal | MARS – IITR | [CLICK](#)

June 2025

- Implemented Huffman, LZ77, LZW, and RLE algorithms in a web portal for file compression
- Engineered seamless compression and decompression workflows using Huffman, LZ77, LZW, and RLE algorithms
- Designed real time analytics dashboard tracking compression ratios for Huffman, LZ77, LZW, and RLE algorithms

Online Video Sharing App | MDG – IITR | [CLICK](#)

June 2025

- Developed a Next.js + Prisma-based video platform with AWSS3 storage for seamless media handling
- Enabled user video recording, upload, and workspace collaboration, storing media securely on AWSS3
- Built scalable backend with video metadata in Prisma, S3 storage, and efficient workspace invites1

E-Commerce Admin Panel | Self Project | [CLICK](#)

January 2025 - February 2025

- Developed SaaS admin dashboard to manage multiple ecommerce stores with customizable store configurations
- Integrated real-time inventory tracking, content management, and interactive sales analytics for informed decisions
- Implemented secure role-based access, responsive UI, and Stripe subscription billing for seamless experience

Real Time Chat Application | Self Project | [CLICK](#)

September 2024 - October 2024

- Built real-time chat application with Socket.IO, JWT authentication, and MongoDB data persistence
- Developed responsive React frontend using Tailwind CSS and DaisyUI for cross-device compatibility
- Implemented user presence tracking, chat rooms, and message history with Node.js/Express backend

GestureON | TMI Course, IITR

July 2023 - November 2023

- Developed real-time hand gesture recognition system using Python, OpenCV, and MediaPipe for contactless control
- Implemented serial communication between Python application and Arduino microcontroller for hardware integration
- Created automated lighting control system detecting gestures to switch lights on/off without physical interaction

Awards / Scholarships / Academic Achievements

- Secured **All India Rank of 4914** in Joint Entrance Examination Advanced 2023
- Secured **99.2 percentile** in Joint Entrance Examination Main 2023

Skills

- Computer languages** : C++, Javascript, Python, Typescript, Node.js, SQL, noSQL
- Frameworks** : ReactJS, NextJS, ExpressJS, Pandas, Numpy
- Tools** : PostgreSql, Mongodb atlas, Postman, Tailwind CSS, NPM
- Platforms** : Github, Jupyter Notebook, Visual Studio Code, Vercel
- Languages Known** : English, Hindi, Bengali

Certificates

Complete Web Development Bootcamp (Udemy) | CERTIFICATE

- Mastered web development fundamentals including HTML, CSS, JavaScript, responsive design, Bootstrap, and React
- Developed server-side skills using Node.js and Express.js for dynamic backend development
- Learned database design and management with SQL, NoSQL like PostgreSQL and Mongodb

Cloud Computing Using Microsoft Azure (Microsoft) | CERTIFICATE

- Gained foundational knowledge of cloud services and architecture through comprehensive training on Microsoft Azure
- Acquired practical skills in deploying and managing applications on Microsoft Azure through hands-on exercises
- Explored key concepts such as virtualization, scalability, and cloud security during the Microsoft-led training