





# Ranjan Kumar

 [github.com/ranjannkumar](https://github.com/ranjannkumar) |  [linkedin.com/in/ranjan-kumar18](https://linkedin.com/in/ranjan-kumar18) |  [ranjan.chem25@gmail.com](mailto:ranjan.chem25@gmail.com) |  +91-9801297611

## EDUCATION

### Indian Institute of Technology Guwahati, India

Bachelor of Technology in Chemical Science and Technology

Nov 2021 - Present

CGPA: 6.88/10

### Langat Singh College

Senior Secondary, Bihar Board

2020

Percentage: 83.6%

## EXPERIENCE

### CloudGrep

Software Development Engineer Intern

May 2024 - July 2024

- Developed **RESTful APIs** using Next.js, Node.js, and MongoDB, focusing on efficient query optimization, error handling, and secure data operations.
- Implemented **JWT** authentication and role-based access control to enhance application security and user management.
- Achieved a **25% reduction in page load times** through server-side caching and asynchronous data handling with **Promises**.
- Boosted frontend performance by **35%** using React Hooks, lazy loading, and memoization.

## PROJECTS

### Distributed File Storage

Feb 2025 - March 2025

Open Source Project

[github.com/ranjannkumar/Distributed-File-Storage](https://github.com/ranjannkumar/Distributed-File-Storage)

- Enhanced **data availability** and **reliability** by designing and developing a **decentralized file storage system** based on a **peer-to-peer (P2P) network architecture**. This setup enables **distributed data storage** across multiple nodes.
- Strengthened **data security** and **integrity** by implementing comprehensive data encryption mechanisms. Utilized the **MD5 hashing algorithm** to **encrypt data** before transmission, ensuring that data remains **secure**.
- Optimized **network communication** within the system by implementing a **robust TCP connection protocol**, facilitating **efficient data transfer** and seamless interaction between nodes in the **peer-to-peer network architecture**.

### Food Delivery App

July 2024 - Aug 2024

Personal Project

[github.com/ranjannkumar/Food-Delivery-App](https://github.com/ranjannkumar/Food-Delivery-App)

- Developed the **UI of the application using React** and effectively managed routing with **React Router DOM**. Utilized **Axios** for seamless backend communication to fetch, send, and update data.
- Built and maintained the server-side logic and **database schema**. Implemented user authentication with **JWT** and **bcrypt**, handled file uploads with **Multer**, and integrated **Stripe** for payment processing
- Designed and implemented the **admin interface** with React. Integrated **React Router DOM** for seamless navigation and **Axios** for API interactions. Utilized **React Toastify** for user feedback and notifications.

### Chat Application

Sep 2024 - Nov 2024

Personal Project

[github.com/ranjannkumar/Chat-Application](https://github.com/ranjannkumar/Chat-Application)

- Designed and developed a **real-time** chat application that supports instant messaging, user authentication, and **multimedia file handling**. Utilized **React** and **Redux** for the frontend, with **MUI** for styling and **Socket.io** for real-time communication and **React Hot Toast** for user notifications.
- Developed with **Express** and **Node.js**, handling API endpoints, real-time messaging via **Socket.io**, and **secure user authentication with JWT and bcrypt**. Managed file uploads using **Multer** and **Cloudinary** for image storage.
- Employed **Mongoose** for **MongoDB** database interactions, including storing user profiles and chat messages.

## TECHNICAL SKILLS

**Programming Languages:** C/C++, JavaScript, Go

**Web Technologies:** HTML, CSS, ReactJs, NextJs, Tailwind, NodeJs, Express

**Database** Database Management System (DBMS), MongoDB

**Miscellaneous:** Object-Oriented Programming(OOPs),Operating System,Computer Networks,System design,SQL,Git,VS Code

## KEY COURSES TAKEN

- Node.js:** Backend Development with Node.js under Student Web's Committee (SWC) IITG
- React.js:** Frontend Development with React.js workshop under Student Web's Committee (SWC) IITG
- Computer Science:** Introduction to Computing, Computing Laboratory, Computational Chemistry

## POSITIONS OF RESPONSIBILITY

### Head at Right and Responsibility Club, IIT Guwahati

April 2023 - April 2024

- Led a team of content and managed all aspects of content production for the Right and Responsibility Club.

## ACHIEVEMENTS AND EXTRACURRICULAR

- Competitive Programming:** Solved **1000+ problems** on different coding platforms. current
- Spardha, Inter Hostel Competitions:** Won **Gold medal** in Carrom, represented Kameng Hostel. 2023
- CRM Executive, Alcheringa, IIT Guwahati** June 2022 - March 2023
- JEE Advanced:** Ranked in the **Top 8%** among 150,000 students. 2021