



HARSH VERMA | 20CH10022

CHEMICAL ENGG. (B.Tech 4Y)



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2024	B.TECH	IIT Kharagpur	8.21 / 10
2019	CBSE	Air Force School Kanpur	91.8%
2017	CBSE	Air Force School Kanpur	10 / 10

INTERNSHIPS

Trainee Intern | Blume Global, Bangalore [May'23 - Jul'23]

- Objective: To implement custom plugins in Kong API Gateway and to develop a GitHub pull request workflow optimization panel
- Implemented a plugin for **JWT token** inclusion in the Authorization header using **Kong**, resulting in a **50%** reduction in internal server calls
 - Efficiently transformed incoming **API requests** into Kafka messages, enabling seamless, real-time publication to a pre-existing **Kafka topic**
 - Developed a **React.js** application to streamline the process of creating pull requests and branches across repositories using **GitHub API**

Lead Developer | LovingRoom Concerts, Amsterdam [Mar'23 - Jun'23]

- Objective: To develop a web-based platform, for managing the entire concert from artist registration and ticket sales to event logistics
- Led a **5-member team** to create the **MERN** web app for artist registrations and user authentication with a **25%** performance improvement
 - Leveraged **Mixpanel** to track website traffic and activities, resulting in a **33%** increase in website traffic and a **50%** increase in registrations
 - Extracted **10k+** contacts from potential venues for concerts using a data extraction solution developed with **Selenium** and **BeautifulSoup**

Backend Developer Intern | Density Exchange, Bangalore [Nov'22 - Feb'23]

- Objective: To develop a blockchain-based cricket fantasy app enabling individual trading of player tokens for transparency in Golang
- Implemented **SuperTokens** authentication and designed an optimized database using **EntGoClient** and **PostgreSQL** for secure storage
 - Engineered marketplace features like **top 10** players, trend analysis and automated trading functionalities for a seamless user experience
 - Developed end-to-end order processing, using **AWS SQS** messaging, blockchain integration, **GoETH** client and transaction monitoring

COMPETITION/CONFERENCE

Hack-An-Intern | Density Exchange [Oct'22]

- Objective: To develop an innovative stock market trading mechanism enabling seamless trading and providing real-time portfolio updates
- Spearheaded a **five-membered team** to secure **3rd place** in a 48-hour long institute-wide hackathon with over **30+ participating teams**
 - Developed a user-friendly interface using **React** and **Redux** for the frontend, **Highcharts.js** for displaying charts and **MySQL** for database
 - Designed and implemented a **stock price matching** algorithm for limit and market orders with **dynamic pricing** using **Django** backend

Website Hackathon | Technology Students' Gymkhana, IIT Kharagpur [Feb'22]

- Objective: Build a unified platform for seamless management of academic, extracurricular and co-curricular data of students at IIT Kharagpur
- Led a Team of **11** members to win the podium in multiple categories, eventually securing a **Gold medal** with over **40+** participating teams
 - Implemented multifaceted user authentication employing **OTP** and password using **JWT** mechanisms and tailored to diverse user roles
 - Orchestrated the deployment of Django backend on **AWS EB**, and React frontend on **AWS Amplify**, facilitated by a robust **CI/CD** pipeline

AWARDS AND ACHIEVEMENTS

- Rated **Specialist** on Codeforces with a maximum rating of **1576** with a rank of **916** among **40k+** participants in Codeforces Round 894
- Secured Global Rank **670** in December Edition of Lunchtime 2021 to become a **4-star** coder on CodeChef with a maximum rating of **1813**

SKILLS AND EXPERTISE

Programming Languages: C | C++ | Python | Javascript | Typescript* | GoLang* **Software tools:** Git | Redis | Docker | Linux* | AWS*
Frameworks/Libraries: ReactJS | Redux | NextJS | NodeJS | ExpressJS | Django | Flask | DRF | EntGo* | Kafka* | GithubAPI* | Selenium*
Skills: Data Structures and Algorithms | Object Oriented Programming **Databases:** MySQL | PostgreSQL | MongoDB* | SQLite* *Familiar

PROJECTS

ChessFusion: Online, AI, and Duel Play | Self Project [Jun'23 - Jul'23]

- Engineered a dynamic chess game using **Next.js**, offering three unique play modes and leveraged the **chess.js** library for move validation
- Enhanced player experience by incorporating real-time moves through the **WebSocket** integration, utilizing the capabilities of **socket.io**
- Implemented the play-with-computer feature by using a **5-layered minimax algorithm**, optimizing it using **alpha-beta pruning** mechanism

Relic Hunter Game | Kshitij'22 [Feb'22 - Mar'22]

- Developed and designed a dynamic and interactive website for Gamefest Kshitij'22, a gaming event which had over **2,000+** registrations
- Designed and deployed Restful APIs using **Express.js** and **MongoDB** cluster, enabling seamless data storage, retrieval, and management
- Integrated Google login functionality with **OAuth2Client** library and managed state with React-Redux for efficient data flow and rendering

POSITIONS OF RESPONSIBILITY

Technical Team Head | Kshitij, IIT Kharagpur [Aug'22 - Apr'23]

- Led a team of **8 sub-heads** along with other heads to develop the official website of **Kshitij 2023**, CA portal, and Relic Hunter (Quiz game)
- Conducted a summer development workshop with over **400+ registered** participants, instructing **4** assignments in JS, ReactJs and NodeJs

General Secretary Technology | Nehru Hall of Residence, IIT Kharagpur [Aug'22 - Apr'23]

- Elected unanimously by **450+** boarders to serve as the General Secretary Technology to represent Nehru Hall in Subcommittee meetings
- Managed a budget of **2.1 lakh INR** for **10** General Championship Technology events, **4** Open IIT events and conducted technical workshops

EXTRA CURRICULAR ACTIVITIES

Social & Cultural: Secured **2nd place** out of **15+** participating teams in **Short Film Making** during the Inter-Hall Championship **2021-22**

Sports & Games: Represented Nehru Hall of Residence in **Chess** and **Cricket** in General Championship for the academic session **2022-23**