ARYAN KUMAR | 20IM30033

INDU. ENGG. INDU. ENGG. & MANG. (M.Tech Dual 5Y)

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	M.TECH DUAL	IIT Kharagpur	8.72 / 10
2019	Class XII, CBSE	Nezamia Public School, Bihar	85.4%
2017	Class X, CBSE	Indian Public School, Bihar	10 / 10

INTERNSHIPS

Full Stack Development SDE Intern | E-Commerce Restaurant Website | Brussel, Belgium *May' 23 - June' 23*
- Collaborated closely with the backend team to ensure seamless integration and optimal website responsiveness between frontend and backend systems.
- Created **dynamic** and **responsive** frontend application leveraging **React.js**, driving a substantial **30%** surge in unique customer interaction on the website.
- Handled server-side requests for login, signup, and feedback pages, and developed secure RESTful APIs using **Node.js**, **Express.js**, and **MongoDB** (**MERN**).
- Developed, integrated, and optimized a user authentication system using JSON Web Tokens (**JWT**) and implemented a database schema using **MongoDB.**

Frontend Engineering SDE Intern | Best Solar | Florence, Italy *Mar' 22 - April' 22*
- Built a responsive website using **React.Js**, **CSS**, and **JavaScript** to showcase the company's services and employed React hooks (**useState** and **useEffect**)
- Utilized the **Google Maps API** and made asynchronous requests to the **Geocoding API** for retrieving the latitude and longitude coordinates information.
- Contributed to the company's growth by ensuring a responsive user experience across devices, resulting in a **10% YOY increase** in mobile conversions.
- Integrated the map component with the **markers** to provide visual representation of the specified location corresponding to the **latitude** and **longitude**.

Responsive Web Design | EA Technology *Jan' 22 - Feb' 22*
- Developed visually appealing and responsive **single-page** company website app from **scratch**, ensuring seamless functionality across various screen sizes.
- Crafted each line of code meticulously to achieve optimal responsiveness and user friendly, resulting in a **12%** increase in the outreach of company clients.
- Implemented a **Figma's** design components, create interactive wireframes and styles to ensure the consistency and scalability across multiple web pages.
- Worked collaboratively with a team of **8 designers** to implement **UI/UX designs** and presented final web product to the company's management team.

PROJECTS

Brainologi | Algorithms Visualizer *May' 23*
- Created website to visualize **sorting algorithms** such as **bubble** and **selection** sort and **searching algorithm** such as **linear** and **binary** search of element.
- Incorporated the **audio effects** and **speed controls** that allow user for the adjustment of algorithm visualization with a customized learning experience.
- Developed algorithms to visually represent the various stages of sorting and searching on a chart by dynamically modifying the **color of bars** in an array.
- Implemented features like **random data generation** for the array of sticks and **dynamic chart** creation using **D3.js** library to visualize algorithm efficiently.

Box of Books | Software Term Project | Guide: *Professor Mamta Jenamani*, Department of Industrial and Systems Engineering,IIT Kharagpur *Jan' 23 - April' 23*
- Box-Of-Books is a full-stack web application built using the MERN stack (**MongoDB**, **Express.js**, **React.js**, and **Node.js**) that simplifies book management.
- Implemented **Create**, **Read**, **Update**, and **Delete** operations for authors to manage their own books efficiently and implemented a **secure login system**.
- Employed **authentication techniques** such as password hashing (**bcrypt**) and JWT (**JSON Web Token**), enabling authors to access their personal accounts.
- Implemented a **grid-like layout** using CSS properties, resulting in a visually appealing display of newly added books in a responsive and organized manner.

ISE NOTES | Academic Helper | Html | CSS | JavaScript *Aug' 21*
- Supported diverse academic needs of IIT Kharagpur students through a **centralized web platform** providing the essential **study resources and materials**.
- Website contains all comprehensive and up-to-date academic materials, reference for core subjects of the ISE Department and is used by **4,000+** students.
- Received **+ve feedbacks** from students and faculty members for a **user-friendly interface**, reliable content, and the valuable support provided by website.

AWARDS AND ACHIEVEMENTS

- **Department Change**: Achieved outstanding academic performance, ranking in the **top 10%** of the batch 2024-25 at the end of the 2nd semester with a department change **CGPA of 9.41**. This accomplishment led to a successful department change to the esteemed Industrial and Systems Engineering (ISE).
- **Joint Entrance Examination (2020)**: Achieved an impressive rank within the **top 1.2%** among **1.10 million** candidates, showcasing exceptional aptitude.
- Solved over **500+ DSA** (Data Structures and Algorithms) questions proficiently in various online platforms, demonstrating strong problem-solving skills.
- Recipient of **Merit Cum Means** scholarship for three consecutive academic years for outstanding academic performances and leadership qualities.

CERTIFICATIONS

AZ-201: Applied Algorithms and Data Structures AlgoZenith *Dec' 22 - April' 23*
- Completed an intensive **16-week** live training program in the **DSA** and Probability, gaining expertise in topics such as Linked List, Binary Tree, and Graph.
- Learned to effectively apply various **Problem-Solving** paradigms, including Greedy, Dynamic Programming, STL, and BIT Manipulation techniques.

SKILLS AND EXPERTISE

Scripting Languages, Frameworks and Libraries: *Proficient*: HTML | CSS | C++ *Intermediate*: JavaScript | MERN *Familiar*: NextJs | Python | Material UI
Platform/Developer Tools: VS Code, MS Office, Git, GitHub, Mongoose, Figma (UI /UX design tool), LT Spice, Power point | Words, Free Cad, Sublime Text

COURSEWORK INFORMATION

Linear Algebra | Statistical Learning | *Programming and Data Structures | Advanced Calculus | Transform Calculus | Entrepreneurship | *Operation Research I+II | Introduction to Finance | Probability and Statistics | Economics | *WSD | Supply Chain Management | *Simulation *courses with lab work*

POSITIONS OF RESPONSIBILITY

- **Web Head** | Chi SquareX Technologies | Maintenance and upkeep of websites | The Deep Tech Startup Society of IIT Khargpur *May' 21 - April' 22*
- **General Secretary** | Elected unanimously by **550+** students of Industrial and Systems Engineering Society (**ISE Society**) |IIT Kharagpur *May' 22 - April' 23*
- **Student Mentor** |Guided mentees in both academic and non-academic activities Student Welfare Group (**SWG**) | IIT Kharagpur *May' 22 - April' 23*
- **Secretary Maintenance** |Acharya Jagadish Chandra Bose Hall of Residence(**JCB HALL**), managing maintenance budget of **INR 2 Lakhs** *May' 21 - April' 22*

EXTRA CURRICULAR ACTIVITIES

- Participated in an exhilarating one month **Website Hackathon** organized by the prestigious **Technology Students Gymkhana at IIT Kharagpur**. *Dec' 21*
- Active member(**2yr**) at National Service Scheme (**NSS**) organization in the campus and participated in a range of impactful activities. *Nov' 20*
- Represented my Hall as a **Wicket Keeper** in the **Inter-Hall Cricket tournament** organized by the Technology Student Gymkhana at IIT Kharagpur. *Feb' 22*

!Self declared by the student, CDC could not verify the relevant documents