DEEPANSHU KUMAR

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Education

- **National Institute of Technology, Rourkela** — **Aug 2024 – Present**
  BTech (CGPA: 7.78) — *Rourkela, Odisha*
- **Tagore Shishu Sadan Inter collegehapur** — **May 2021**
  CBSE, Science (PCM) – Percentage: 69.6% — *Hapur, UP*
- **Oxford Green Public School (greater noida)** — **May 2023**
  CBSE – Percentage: 85.8% — *Greater Noida, UP*

Relevant Coursework

- Data Structures & Algorithms
- Operating Systems
- Database Management Systems
- Process Design
- Heat & Mass Transfer
- Chemical Reaction Engineering
- Fluid Mechanics
- MATLAB

Projects

- **CFD Analysis of Fluid Flow in Pipe Network** — **march 2025**
  · Tools: ANSYS Fluent, MATLAB
  · Conducted CFD simulation of velocity distribution and pressure drop in complex piping systems.
  · Analyzed turbulence and laminar flow regimes under different Reynolds numbers.
  · Compared simulation outputs with theoretical fluid mechanics models.
- **E-commerce REST API (VS Code)** — **april 2025**
  · Tools: Node.js, Express, MongoDB, Postman
  · Developed REST API with CRUD operations, JWT authentication, and database integration.
  · Implemented error handling, middleware logging, and load testing for scalability.
  · Deployed on cloud environment with proper documentation and testing.
- **Chat Application (VS Code)** — **may 2025**
  · Tools: Python, Socket Programming, Tkinter
  · Developed a multi-user chat application supporting private/group chats.
  · Implemented online/offline status indicators and persistent conversation logs.
  · Ensured concurrency using threads for smooth multi-client communication.
- **Portfolio Website** — **June 2025**
  · Tools: React, HTML, CSS, JavaScript, Node.js
  · Designed and deployed a responsive personal website to showcase projects.
  · Integrated backend contact form using Node.js and Express.
  · Deployed on GitHub Pages with CI/CD pipeline for updates.

Technical Skills

- **Languages:** Python, C, C++, Java, JavaScript (ES6+), SQL
- **Developer Tools:** VS Code, Git/GitHub, Jupyter Notebook, Postman,
- **Libraries/Frameworks:** React, Node.js, Express,
- **Operating System:** Windows
- **Databases:** MySQL, MongoDB, SQLite
- **Core Tools:** Aspen Plus, ANSYS Fluent, MATLAB

Leadership / Extracurricular

- **AIChe Club** — **April 2025 – Present**
  Member of web developement team — *NIT Rourkela*
  * Contributed to frontend and backend development of club projects using HTML, CSS, JavaScript, and Python.
  * Collaborated with team members to design and deploy responsive web applications.