Ranjan Kumar

EDUCATION

B.Tech in Computer Science and Engineering

 $Indian\ Institute\ of\ Technology\ Patna$

Senior Secondary (Class 12th)

Lord Buddha Public School, Aurangabad, Bihar

Secondary (Class 10th)

Lord Buddha Public School, Aurangabad, Bihar

Nov. 2022 - May 2026(Expected)

Current CGPA: 8.87

May 2022 *Grade:* **95**%

May 2020

Grade: 98.2%

PROJECTS

P2P File Sharing System | ReactJS, NodeJS, ExpressJS, MongoDB | Autumn 2024

Source Code

- Designed and developed a secure P2P file sharing system with user registration, role-based access control, and file categorization (e.g., documents, images, videos).
- Implemented robust features including file upload/download, search functionality by name/type/description, and encrypted file transfers using a custom protocol.
- Created a user-friendly interface enabling seamless file sharing, secure communication, and efficient peer-to-peer file transfers.

Portfolio-Optimiser | Python, Pandas, pandas-datareader, NumPy, matplotlib | Spring 2024

Source Code

- Optimized stock portfolios using the Efficient Frontier and Sharpe Ratio, analyzing historical FAANG stock data via Yahoo Finance API.
- Implemented portfolio **performance metrics**, including **annual returns**, **volatility**, and **asset allocation** visualization to aid investment decisions.

ACHIEVEMENTS

• Expert on Codeforces with a maximum rating of 1618.

Profile link

• 5-star rated CodeChef coder with a peak rating of 2097 and a global rank of 949.

Profile link

• Secured Rank 182 in India and 1192 globally out of 22,494 participants in Round 1 of Meta Hacker Cup 2024.

Certificate

- Ranked 41st globally in CodeChef Starters 126 (Div. 2) among 2,000+ participants.
- Secured a global rank of 96 in CodeChef Starters 120(Div. 4) among 27,700+ active participants.
- Secured a global rank of 663 in Codeforces Round 951(Div. 2) among 22,000+ active participants.
- Mastered data structure and algorithms by solving 1200+ problems on top coding platforms and online judges.
- Secured 99.8 percentile and All India Rank 1817 out of more than 10 lakh candidates in JEE Mains 2022.
- Secured an All India Rank of 3247 out of more than 1.5 lakh candidates in JEE Advanced 2022.

SKILLS

Languages and Frameworks: C/C++, JavaScript, HTML, CSS, MySQL, familiar with Object Oriented Programming(OOPS), Windows, Node.JS, ExpressJS, MongoDB, ReactJS.

Coursework

Computer Science: Programming & Data Structures, Algorithms, Discrete Mathematics, Database Management Systems, Computer Networks, Operating Systems, Software Lab and Tools, Theory of Computation.

Mathematics: Linear Algebra, Ordinary Differential Equation, Complex Analysis, Optimization Techniques, Probability Theory & Random Process.

CERTIFICATIONS

• Participated in **Open AI Hackathon** conducted by **Microsoft**. (Jan 2024)

Certificate

• Successfully completed the **Google Cloud Study Jam** offered by Google Cloud demonstrating proficiency in Cloud Computing. (2023)

Certificate

Extra-Curricular

• Collaborated with **cross-functional teams** to plan and execute successful events for IIT Patna's **Techno-Management Fest (Celesta)** and the **Training and Placement Team**, enhancing **event participation** and **placement coordination**.