# 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: 8.92

May 2022 Grade: **95%** May 2020

Grade: 98.2%

## PROJECTS

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

Source Code

- Developed a tool to optimize stock portfolios using the Efficient Frontier and Sharpe Ratio, maximizing returns and minimizing risk.
- Integrated Yahoo Finance API via pandas-datareader to analyze historical FAANG stock data.
- Implemented portfolio performance metrics, enhancing investment decision-making through annual returns, volatility, and asset allocation visualization.

Classic Snake Game | HTML, CSS, JavaScript | Spring. 2024

Source Code

- Leveraged web development technologies to create interactive features such as **snake movement** and **collision detection**, ensuring a seamless user experience.
- Enhanced user experience with **integrated sound effects** and captivating **visual styling** using CSS, creating an immersive and appealing game environment.

#### ACHIEVEMENTS

• Expert on Codeforces with a maximum rating of 1618.

Profile link

• 5 Star Coder on Codechef with a peak rating of 2050.

Profile link

- Ranked 41st globally in CodeChef Starters 126 (Div. 2) among 2,000+ participants.
- $\bullet \ \ {\rm Secured} \ \ a \ \ {\rm global} \ \ {\rm rank} \ \ of \ \ {\bf 96} \ \ {\rm in} \ \ {\bf CodeChef} \ \ {\bf Starters} \ \ {\bf 120} \\ ({\rm Div.} \ \ {\bf 4}) \ \ {\rm among} \ \ {\bf 27,700} + \ \ {\rm active} \ \ {\rm participants}.$
- Secured a global rank of 1002 in Codeforces Round 954(Div. 3) among 23,900+ active participants.
- Achieved 1345th place globally in Educational Codeforces Round 164(Div. 2) among 13,000+ active participants.
- Mastered data structure and algorithms by solving 1000+ 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

#### Coursework

Computer Science: Programming & Data Structures, Algorithms, Discrete Mathematics, Database Management 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

 Secured an AIR 2727 in Codekaze-Sep'23: Round 2 Naukri Engineers Week Conducted By Coding Ninjas. (2023)

Certificate

#### Extra-Curricular

• Volunteered at the **Techno-Management Fest of IIT Patna(Celesta)**, collaborating with cross-functional teams to plan and execute successful events.

2022-23