

PARAS BANSAL

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Education

Indian Institute of Information Technology, Allahabad <i>B.Tech in Information Technology; CGPA: 8.8</i>	Aug 2024 – 2028 <i>Prayagraj, Uttar Pradesh</i>
Golden Earth Global School, Sangrur <i>Class 12 (CBSE); Percentage: 94.6%</i>	Apr 2023 – Mar 2024 <i>Sangrur, Punjab</i>
Golden Earth Global School, Sangrur <i>Class 10 (CBSE); Percentage: 97%</i>	Apr 2021 – Mar 2022 <i>Sangrur, Punjab</i>

Technical Experience

Full Stack Developer <i>Samadhaan (Project)</i>	June 2025 – Aug 2025
<ul style="list-style-type: none">Engineered a scalable MERN stack platform to digitize public grievance reporting, handling 12+ categories of civic issues.Developed a responsive React.js frontend with Tailwind CSS, reducing page load time by 25% and enabling live tracking.Architected a secure Node.js/Express backend with 15+ RESTful APIs, implementing JWT authentication for 3 user roles.Leveraged MongoDB indexing to manage 100s of scalable records, optimizing query performance for admin dashboards.	
Algorithm Engineer <i>Energy-Aware Beam-ACO Routing</i>	Oct 2025 – Dec 2025
<ul style="list-style-type: none">Devised a custom C++ optimization algorithm combining Ant Colony Optimization (ACO) and Beam Search.Embedded Beam Search (top-K pruning) to focus exploration, improving algorithmic convergence speed by approximately 40%.Formulated a physics-based cost function incorporating drag and velocity, achieving 15% higher energy efficiency.Structured a modular object-oriented engine in C++ (STL), ensuring clean separation of graph modeling and heuristic logic.	
Backend Lead <i>Uni-Trade (Project)</i>	Sept 2025 – Dec 2025
<ul style="list-style-type: none">Deployed a full-stack campus marketplace for 2,000+ students, facilitating the exchange of 300+ academic items.Streamlined product discovery by integrating a MySQL database with a 5-category filtering system, reducing lookup time by 60%.Enforced strict security protocols using Regex-based email validation to ensure 100% student-only access and eliminate spam.Strategized the system architecture to support future scaling for real-time WebSockets chat and AI-driven price suggestions.	

Technical Skills

Languages: C++ (STL), C, Java, JavaScript (ES6+), Python, HTML5, CSS3, SQL

Frameworks/Libs: React.js, Node.js, Express.js, Tailwind CSS, NumPy, Pandas, Bootstrap

Tools/Platforms: Git, Github, Linux, VS Code, MongoDB, MySQL, Postman, Vercel

Coursework: Data Structures & Algorithms (DSA), Object-Oriented Programming (OOP), DBMS, Operating Systems

Coding Profiles

CodeChef (3 Star, 1664) | Codeforces (Expert, 1710)

Achievements

- Expert on Codeforces with a maximum rating of **1710**; ranked **830** among **91,904+** active Indian users and in the **top 5% globally**, with a best contest rank of **451** in Codeforces Round 1066 (Div. 1 & 2).
- Secured global ranks of **181** in CodeChef Starters 202 and **202** in CodeChef Starters 212, competing against thousands of participants worldwide.
- Solved **500+** algorithmic problems across Data Structures, Graphs, Dynamic Programming, and Trees on Codeforces, CodeChef, and LeetCode.
- JEE Main 2024: **AIR 3341** (top 0.2% among 1.4 million candidates); JEE Advanced 2024: **AIR 9232**.

Leadership & Volunteering

Student Mentor <i>Prayaas (Social Service)</i>	2024 – Present
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- Collaborated with a team to mentor **100+ underprivileged students**, creating resources rated 'Excellent' by 90% of attendees.

Head Boy <i>Golden Earth Global School</i>	Class 10
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- Led a student **council of 35 members** to organize 10+ large-scale school events, enhancing school-wide communication.