

# PARAS BANSAL

 [Portfolio](#) |  [parasb736@gmail.com](mailto:parasb736@gmail.com) |  [+91-7889099620](tel:+91-7889099620) |  [LinkedIn](#) |  [Github](#)

## Education

**Indian Institute of Information Technology, Allahabad**  
*B.Tech in Information Technology; CGPA: 8.89*

**Aug 2024 – 2028**  
*Prayagraj, Uttar Pradesh*

**Golden Earth Global School, Sangrur**  
*Class 12 (CBSE); Percentage: 94.6%*

**Apr 2023 – Mar 2024**  
*Sangrur, Punjab*

**Golden Earth Global School, Sangrur**  
*Class 10 (CBSE); Percentage: 97%*

**Apr 2021 – Mar 2022**  
*Sangrur, Punjab*

## Key Projects

**Samadhaan** | *MERN Stack, JWT, Tailwind CSS* | 

**June 2025 – Aug 2025**

- Designed and developed a scalable **MERN stack** grievance platform supporting **12+ civic issue categories**.
- Engineered a responsive **React.js + Tailwind CSS** frontend, achieving a **25% reduction** in page load time.
- Built a secure **Node.js/Express** backend with reliable **15+ RESTful APIs** and role-based **JWT authentication**.
- Implemented **MongoDB indexing** and optimization techniques, enhancing the admin dashboard's query efficiency and decreasing average API response time by **20%**, ensuring faster user experience.

**Energy-Aware Beam-ACO Routing** | *C++17, STL, Metaheuristics* | 

**Oct 2025 – Dec 2025**

- Engineered a hybrid **C++/ACO/Beam Search algorithm**, reducing robotic path-planning costs by **15%**.
- Embedded **Beam Search** (top-K pruning) to focus exploration, improving algorithmic convergence speed by approximately **40%**.
- Devised a novel physics-based cost function accounting for drag and velocity, resulting in a **15% energy efficiency** gain by streamlining power use across routing paths.

**Uni-Trade** | *Node.js, EJS, MySQL, HTML/CSS/JS* | 

**Sept 2025 – Dec 2025**

- Developed a full-stack campus marketplace serving **2,000+ students** with **300+ academic listings**.
- Integrated a **MySQL** database with category-based filtering, reducing search latency by **60%**.
- Implemented secure **Regex-based email validation** to ensure **100% student-only** platform access.

## Technical Skills

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

**Technologies/Frameworks:** Git, Github, Linux, React.js, Node.js, Tailwind CSS, NumPy, MongoDB, MySQL

**Coursework:** Data Structures & Algorithms (DSA), Object-Oriented Programming (OOP), DBMS, Operating Systems, Computer Networks, Theory Of Computation

## Coding Profiles

CodeChef (**4 Star**, 1820) 

Codeforces (**Expert**, 1710) 

LeetCode (**Knight**, 1914) 

## 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, competing against thousands of participants worldwide.
- Top **38** global finish in LeetCode Weekly Contest 484, highlighting strong algorithmic and problem-solving skills.
- 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

**Head Boy** | *Golden Earth Global School*

**Class 10**

- Led a student **council of 35 members** to organize 10+ large-scale school events, enhancing school-wide communication.

**Student Mentor** | *Prayaas (Social Service)*

**2024 – Present**

- Collaborated with a team to mentor **100+ underprivileged students**, creating resources rated 'Excellent' by 90% of attendees.