

Pramag Basantia

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Portfolio — LinkedIn — GitHub

EDUCATION

Indraprastha Institute of Information Technology Delhi (IIITD)

Jul 2024 – Jul 2028

B.Tech in Computer Science and Applied Mathematics

Delhi, India

– **CGPA: 8.90** (Till 2nd Semester)

– **Ranked 2nd** in the Stream.

TECHNICAL SKILLS

Languages: C++, Java, Python, C, SQL, JavaScript

Frameworks: React, Next.js, Java Swing, Tailwind CSS, Maven, JUnit

Developer Tools: Git/GitHub, Linux, Docker, VS Code, IntelliJ IDEA, Figma, L^AT_EX

Core CS: Data Structures & Algorithms, Operating Systems, OOP, Computer Architecture (RISC-V), DBMS

Mathematics: Linear Algebra, Probability & Statistics, Discrete Structures

COMPETITIVE PROGRAMMING

- **CodeForces Specialist:** Achieved a maximum rating of **1509** (Handle: Pramag_IIITD).
- **Global Rank 744** in CodeForces Round 1017 (Top 3% among 23,000+ candidates).
- **Global Rank 920** in CodeForces Round 1065 (Top 5% among 17,000+ candidates).
- **Meta Hacker Cup 2025:** Secured Global Rank 2000 in Round 2 and Rank 2444 in Round 1 (Top 15%).
- **ICPC Collegiate:** Secured Rank 56 in ICPC de-Tryst (IIT Delhi) and Rank 1281 in ICPC Online Prelims.
- **Contest Achievements:** Achieved Rank 36 in Algozenith Prelims and Rank 96 in NIT Silchar Coding Contest.
- **Intra-College:** Secured Rank 2 in IIITD Prosort and Armsort (Speed Solving); Rank 3 in Quant Team Competition.
- **Problem Solving:** Solved over **1500+** algorithmic problems across LeetCode, CodeForces, and CodeChef.

PROJECTS

University ERP System | Java, Swing, Maven, MySQL, TCP

Sep 2025 – Nov 2025

- Developed a robust multi-module client-server desktop application capable of managing 500+ course enrollments.
- Engineered a custom TCP protocol implementing 25+ unique commands to handle secure authentication.
- Integrated a real-time notification system using polling-based state management, enhancing UI responsiveness by 25%.

EGOS Operating System Enhancement | C, RISC-V Architecture

Oct 2025 – Dec 2025

- Architected a Multi-Level Feedback Queue (MLFQ) scheduler to optimize CPU usage via dynamic process demotion.
- Constructed kernel-level system utilities (grep, wc) by bypassing standard libraries and utilizing direct syscall interfaces.
- Implemented comprehensive process lifecycle tracking, capturing 7 real-time metrics across various kernel interrupt handlers.

RISC-V Assembler & Simulator | Python, Assembly, Computer Architecture

Jan 2025 – May 2025

- Built a complete RISC-V assembler from scratch, handling complex lexical parsing and precise binary encoding.
- Devised a cycle-accurate simulator featuring 32 general-purpose registers and 64KB memory with precise execution logic.
- Formulated a modular automated testing framework, validating system integrity against 20+ rigorous edge cases.

Project Manager Web App | React, Next.js, TypeScript, Tailwind

Sept 2025 – Dec 2025

- Deployed a full-stack task management application featuring real-time state synchronization using the React Context API.
- Optimized workflow efficiency by 30% through the implementation of dynamic sorting and complex filtering algorithms.
- Designed an interactive analytics dashboard incorporating circular progress visualization for tracking project metrics.

LEADERSHIP & INVOLVEMENT

Member | Foobar (IIITD Coding Club)

Nov 2025 – Present

- Engaged in competitive coding workshops and collaborated with peers to solve complex algorithmic problems.

Member | Quant Society (IIITD)

Jun 2025 – Present

- Participated in discussions on quantitative finance models and algorithmic trading strategies.

Vice Head Boy & Discipline Head | High School Student Council

Jun 2022 – Jun 2024

- Led a team of student council members to maintain discipline and organize annual cultural events.