

# AVINESH PRATAP SINGH

[in LinkedIn](#) | [+91 630-797-8382](#) | [pratapavinesh.com](#) | [pratapavinesh2003@gmail.com](#) | [GitHub](#)

## Education

• <b>IIT Dhanbad</b>	<b>B.Tech Computer Science</b>	<b>CGPA: 8.9</b>	<b>Dhanbad</b>	<b>12/2020 - 05/2024</b>
• <b>JNV Bangalore</b>	<b>12th(CBSE)</b>	<b>Percentage: 94.2%</b>	<b>Bangalore</b>	<b>06/2019 - 05/2020</b>
• <b>JNV Bahraich</b>	<b>10th(CBSE)</b>	<b>Percentage: 91%</b>	<b>Bahraich</b>	<b>06/2017 - 05/2018</b>

## Skills & Relevant Coursework

- C++ | Python | SQL | MySQL | MongoDB | Git | Github
- Systems Design | Mathematics | DSA | DBMS | OOPS | OS | Computer Network | Software Engineering
- [Codeforces](#) - 1753 [Expert](#) PC-1123 | [Codechef](#) - 2189 5 [★](#) PC-516 | [Atcoder](#) - 1324 [Cyan](#) PC-391 | [Leetcode](#) - 2331 PC-1000
- [Guardian](#) | [Hackerrank](#) - 2377.29 6 [★](#) [Gold level](#) PC-500

## Experience

- Software Engineer, Full time** **Arista** **Bangalore, India** **07/2024 - Present**
- Managed the **FlexDigest** feature, a **critical system component** ensuring **efficient load-balancing** of incoming traffic across eligible outgoing ports. Provided new chip support and protocol header integration.
  - Leveraged C++, Python, Git, and GitHub to enhance the system, resulting in network performance by 25% and reducing latency by 15%.
- Software Engineer, Intern** **Arista** **Bangalore, India** **05/2023 - 07/2023**
- Designed and implemented Load Balancing in the case of Tunnelled Packets Like MPLS, and GTP.
  - Oversaw 100% of the project lifecycle, integrated CI/CD pipelines, and conducted code reviews. Improved 70% Performance and 30% More Control than Previous Methods. Also Implemented the Symmetric Hashing in the Case of Tunnelled Packets.
- Software Developer, Part-time** **TEXMiN** **Dhanbad, India** **05/2022 - 05/2023**
- Designed and developed end-to-end solutions for automating the sprinkler system targeting More than 50 coal Mines.
  - Completed almost 100% of the development lifecycle Processes, including hardware programming, sensor tuning, **developing and Optimise the algorithms, test and deploy the application, and physically deploy sensor nodes.**
  - Achieved an impressive 80% reduction in water wastage and minimised manual work by 90%.

## Projects

- Scalable Medicine bottle label Parser** **MedLabel Parser** **01/2024 - 05/2024**
- Process medicine labels to extract crucial information such as names, compositions, and expiry dates.
  - Used AWS S3 for image storage, MongoDB NoSQL for scalable DBMS, and JWT-based SSO for secure authentication.
  - Designed a 100% Scalable and highly efficient system through Splitting of Services, Redundancy, Partitions, cache, Queue, Sharding,
  - For easy deployments, CI/CD pipelines, containers, and Kubernetes are taken. [Link: pratapavinesh](#)
- Energy-Efficient FANET Protocol** **EcoFly** **08/2023 - 05/2024**
- Implemented Energy-Efficient FANET Protocol for optimised UAV communication in disaster scenarios.
  - Optimization (IPSO) algorithms for positioning, clustering, selecting cluster head and routing.
  - Used Matlab for simulation and visualisation and tested with corner cases. [Link: pratapavinesh](#)
- Loyalty Rewards System** **FlipCoin** **07/2023 - 12/2023**
- Designed and implemented a cutting-edge blockchain-enabled loyalty and rewards system for E-commerce platforms.
  - Engineered **blockchain-based fungible loyalty points**, optimising user engagement and rewards using **Smart Contracts and solidity.**
  - Orchestrated instant on-chain settlements, designed rules for token earning, and developed a user-friendly interface for efficient loyalty point management and redemption using **ReactJS.** [Link: pratapavinesh](#)

## Responsibility and Mentorship

- **Codeism Instructor:** I was part of the top 10 students' team at IIT Dhanbad. Mentored More than 200 students in competitive programming, project development and interview preparation. More than 180 students were placed. **10/2022 - 03/2024**
- **BFX Programming coordinator:** Guided over 50 students in DSA, Computer Fundamentals and project development. **04/2021 - 05/2022**
- **Class Representative** of IIT Dhanbad CSE Branch. **08/2023 - 05/2024**

## Others

- **JEE Advance and JEE Mains:** Secured **AIR 2888** in **JEE Advance** and **99.66 percentile** in **JEE Mains.**
- Published the Research Paper [Prioritization-based Delay Sensitive Task Offloading](#) on Pervasive and Mobile Computing
- **Secured 1st Position** in overall CSE batch in 8th semester with **9.88/10.00 SGPA.**
- **Amazon ML SSP ( 2022 and 2023) | TOP 100 in Amazon HackON 2022 |Qualified Flipkart Grid 5.0 Software Development Track**
- **Global Rank 240 in Google Kickstart 2022 Round F | Global rank 47 in Codechef LunchTime 2022 | Global Rank 15 in Codechef CookOff 2022**