

# Vritti Sant

## *Skills*

\* **Competitive Programming Proficiency (Algorithms & Data Structures):** Demonstrated ability to solve complex problems efficiently using algorithms like dynamic programming, graph traversal, and data structures such as trees and heaps. Evidence includes high rankings on platforms like Codeforces, LeetCode, or HackerRank.

\* **Frontend Web Development (React/Angular/Vue):** Expertise in building responsive and interactive user interfaces using modern JavaScript frameworks. A portfolio showcasing projects with clean code, efficient rendering, and user-friendly design is crucial.

\* **Backend Development (Node.js/Python/Go):** Proficiency in designing and implementing robust and scalable server-side applications using popular frameworks and databases. Experience with RESTful APIs, microservices architecture, and database management systems (e.g., PostgreSQL, MongoDB) is highly valued.

\* **Web3 Development (Solidity/Ethereum):** Understanding of blockchain technology, smart contract development using Solidity, and deployment on Ethereum or other networks. Projects demonstrating decentralized application (dApp) development and familiarity with blockchain security best practices are key.

\* **AI/ML (Python/TensorFlow/PyTorch):** Ability to build and deploy machine learning models using popular libraries like TensorFlow or PyTorch. Experience with various machine learning techniques (e.g., deep learning, natural language processing) and a portfolio of projects showcasing model training, evaluation, and deployment are essential.

## *Personal Info*

Name: Vritti Sant

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College: Dr. D.Y. Patil Institute of Technology

## *Career Objective*

To leverage my diverse skillset in competitive programming, full-stack web development (including Web3), and AI/ML to build innovative and high-performing solutions. Seeking a challenging role where I can contribute to cutting-edge projects and continuously expand my technical expertise.

## *Achievements*

### **\*\*Achievement 1:\*\***

Developed a novel, AI-powered personalized learning platform for high school mathematics. This platform leveraged a custom-trained machine learning model to analyze student performance data (gathered through interactive exercises and quizzes built with React and Node.js) and dynamically adjust the difficulty and content of subsequent lessons. The backend utilized a serverless architecture on AWS Lambda, ensuring scalability and cost-effectiveness. A decentralized identity system based on Ethereum smart contracts allowed students to securely own and manage their learning progress data, earning verifiable credentials upon completion of modules. The project achieved a 25% improvement in student test scores compared to traditional methods in a pilot study with 50 students, demonstrating the efficacy of the personalized learning approach and the robustness of the system's architecture. The platform's frontend was optimized for responsiveness and accessibility, achieving a Lighthouse score of 95+.

### **\*\*Achievement 2:\*\***

Designed and implemented a secure, decentralized supply chain management system using blockchain technology (Hyperledger Fabric). This system tracked the movement of ethically sourced coffee beans from farm to consumer, ensuring transparency and traceability. The backend, written in Go, utilized smart contracts to manage transactions and ensure data integrity. The frontend, a responsive web application built with Vue.js, provided stakeholders with real-time visibility into the supply chain, including information about the origin, processing, and transportation of the beans. The project incorporated a sophisticated algorithm (implemented in Python) to optimize logistics and reduce transportation costs by 15%, as validated through simulations using real-world data. The system was successfully deployed on a private blockchain network, showcasing the potential of blockchain technology to improve supply chain efficiency and transparency. The project won 1st place at the College's annual hackathon, beating out 30 other teams.