

Vats Pratap Singh

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TECHNICAL SKILLS

Programming & Backend: C++, Python, Node.js, Machine Learning

Frontend: React.js, HTML, CSS

Database: MongoDB, Amazon S3, MySQL

DevOps & Tools: GitHub, Jenkins, Visual Studio Code

Cloud Services: Amazon Web Services

EDUCATION

Vellore Institute of Technology, Bhopal

Aug 2022 – Aug 2026

B.Tech in Computer Science and Engineering (Cloud Computing and Automation)

CGPA: 8.40

Delhi Public School, Indore

March 2022

Senior Secondary (Grade XII), CBSE, Percentage: 74.6%

Delhi Public School, Indore

March 2020

High School (Grade X), CBSE, Percentage: 83.5%

PROJECTS

TerraTech: Intelligent Crop Price Forecasting

Mar 2024 – May 2024

- **Project Description:** Developed a machine learning web application for intelligent crop price forecasting using Flask, TensorFlow, and XGBoost.
- Implemented **LSTM** and **XGBoost** models, and combined them into a hybrid approach for improved accuracy.
- Built an interactive Flask-based UI with data upload, model selection, and real-time forecasting features.
- Deployed dashboards with visual analytics for trend detection, market volatility, and policy recommendations.

NEXUS: Real-Time Social Chat Application

Jun 2024 – Jul 2024

- **Project Description:** Designed and implemented a full-stack **MERN** chat application with real-time messaging, video calls, and social networking features.
- Developed backend services with **Node.js**, **Express.js**, and **MongoDB**, including JWT authentication and secure password hashing with bcrypt.
- Integrated **Stream Chat & Video APIs** for instant messaging, video calls, notifications, and online/offline tracking.
- Built a responsive React frontend with **Tailwind CSS**, **DaisyUI**, and deployed on **Render** with MongoDB Atlas as the cloud database.

DevStream: CI/CD Pipeline with Jenkins and Docker

Jul 2025 – Aug 2025

- **Project Description:** Built a complete CI/CD pipeline project demonstrating modern DevOps practices with automated build, test, and deployment workflows.
- Implemented **Jenkins declarative pipeline** with GitHub webhook triggers for continuous integration.
- Containerized backend API using **Docker multi-stage builds**, improving security and efficiency.
- Automated **unit & integration testing** with Jest and Supertest, achieving over **50% code coverage**.
- Integrated **ngrok** for secure webhook tunneling and configured GitHub hooks for real-time triggers.

CERTIFICATIONS

IBM DevOps Fundamentals [**IBM**]

Apr 2025

AWS Solution Architect - Associate Certificate [**Ethnus**]

Apr 2025

DevOps on AWS Certificate [**Coursera**]

Dec 2024

AWS Cloud Technical Essentials Certificate [**Coursera**]

Mar 2024

HTML, CSS, and JS for Web Developers Certificate [**Coursera**]

Jan 2024

ACHIEVEMENTS

Completed **200 Days of Code** Challenge

Solved **185+** questions on **LeetCode**

Solved over **100** questions on **GeeksforGeeks**

Achieved **1783** Contest Rating on **GeeksforGeeks** and **1224** Contest Rating on **CodeChef**