# 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 (EC2, S3, RDS)

**Workflow Automation:** n8n, ChatGPT, Claude

## 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.

**TrendSage: Automated Market Insights Pipeline**                                    Aug 2025

- **Project Description:** Built an automated system for **market research and competitor analysis** leveraging APIs, AI, and automation workflows.
- Integrated **Twitter, Google News, and Yahoo Finance APIs** to collect real-time social, financial, and news data.
- Applied **OpenAI GPT-3.5** for sentiment analysis, competitor tracking, and generation of daily insights.
- Automated scheduling with error handling to deliver **daily market reports** via JSON, Supabase, and notifications (Slack/Telegram).
- Reduced manual research by 8+ hours/week through **AI-driven intelligence and strategic recommendations**.

**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

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|---|---|
| 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 |