

Abhishek Kumar Verma

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Professional Summary

MCA (Data Science) graduate with practical experience in Artificial Intelligence, Machine Learning, Data Analytics, Retrieval-Augmented Generation (RAG), and Full-Stack Python Development. Skilled in designing and deploying intelligent applications using Python, Flask, MongoDB Atlas, MySQL, Power BI, Hugging Face Transformers, and modern data analytics tools.

Passionate about leveraging Artificial Intelligence, Data Science, and Software Engineering to solve real-world challenges and build scalable, data-driven solutions.

Technical Skills

- **Programming Languages:** Python, JavaScript, C, C++, HTML, CSS
- **Artificial Intelligence Machine Learning:** Machine Learning, NLP, Retrieval-Augmented Generation (RAG), Vector Embeddings, YOLO
- **Data Science Analytics:** Pandas, NumPy, Matplotlib, Power BI, Excel
- **Web Development:** Flask, REST APIs, Bootstrap
- **Databases:** MongoDB, MongoDB Atlas Vector Search, MySQL
- **Cloud Deployment:** AWS Data Engineering, VPS Hosting, Linux Server Administration
- **Google Workspace Administration:** Business Gmail Setup, DNS Configuration, MX Records, Email Routing, User Administration, SMTP Configuration
- **Tools:** Git, GitHub, VS Code

Soft Skills

- Problem Solving
- Communication Skills
- Team Collaboration
- Logical Reasoning
- Analytical Thinking
- Time Management

Education

Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand 2024–2026
Master of Computer Applications (Data Science)

Vinoba Bhave University, Hazaribag, Jharkhand 2020–2023
Bachelor of Computer Applications
Percentage: 68.8%

Internship Experience

Software Development Intern Jan 2026 – May 2026
Software Development Cell, Dev Sanskriti Vishwavidyalaya

- Developed and managed academic automation systems and dashboard applications.
- Built Quiz Master Application with live quiz monitoring and analytics features.
- Developed E-Certificate Generator with automated PDF generation and WhatsApp integration.
- Created QR-based Attendance Management System with analytics dashboard.
- Developed CS-Connect Broadcast Platform for campus-wide communication management.
- Worked on database optimization, reporting systems, and application deployment.

Data Science Intern, AssetPlus Consulting Company Jun 2025 – Jul 2025

- Developed electric meter wire termination detection system using Python and YOLO.
- Built Flask-based web interface for real-time model deployment.
- Generated automated Excel reports and data visualizations.
- Worked on machine learning integration and analytics reporting.

Major Projects

DSVV AI Chatbot using RAG and MongoDB Atlas

- Developed an AI-powered university information chatbot for Dev Sanskriti Vishwavidyalaya (DSVV).
- Implemented Retrieval-Augmented Generation (RAG) architecture using MongoDB Atlas Vector Search.
- Scraped and indexed university website data including admissions, courses, contact information, and institutional details.
- Generated semantic embeddings using Sentence Transformers (all-MiniLM-L6-v2).
- Built context-aware retrieval system with multilingual support (Hindi and English).
- Implemented anti-hallucination architecture to ensure responses are generated only from retrieved university data.

Electric Meter Wire Termination Detection System

- Developed a computer vision solution using Python and YOLO for electric meter wire termination detection.
- Built Flask-based web interface for real-time prediction and image analysis.
- Automated result reporting and visualization using Python analytics tools.
- Improved inspection efficiency through AI-assisted defect identification.

Quiz Master Application

- Developed a full-stack quiz management platform using Flask and MongoDB.
- Implemented real-time participant monitoring, timer synchronization, quiz analytics, and PDF reporting.
- Designed administrative dashboard for quiz creation, management, and performance tracking.
- Supported large-scale academic quiz events with automated result generation.

CS-Connect Broadcast Platform

- Developed centralized campus communication and broadcast management platform.
- Implemented audience segmentation, scheduled messaging, campaign management, and engagement analytics.
- Built administrative dashboard for communication workflow automation.
- Enhanced institutional communication efficiency through centralized broadcasting.

E-Certificate Generator System

- Developed automated certificate generation and distribution platform.
- Implemented PDF certificate generation with Email and WhatsApp delivery integration.
- Designed participant attendance tracking and certificate issuance workflow.
- Reduced manual certificate processing effort through automation.

QR-Based Attendance Management System

- Developed QR-code based attendance management platform.
- Implemented attendance analytics dashboard and automated reporting features.
- Added class-wise filtering, attendance visualization, and historical attendance tracking.
- Improved attendance recording accuracy and operational efficiency.

AI-Enabled Multi-Language Code Editor and Programming Lab Platform

- Developed an AI-powered online programming laboratory and code editor supporting Python, C, C++, and Java.
- Designed an integrated coding environment with real-time code execution, syntax highlighting, program compilation, and output visualization.
- Implemented OpenAI API integration for intelligent code assistance, automated error detection, debugging suggestions, and code optimization recommendations.
- Built AI-based code review system capable of analyzing logic errors, syntax errors, runtime exceptions, and performance issues.
- Developed role-based Admin Dashboard for monitoring student activities, coding sessions, compilation history, laboratory usage statistics, and performance analytics.
- Implemented student progress tracking, assignment management, coding assessments, and automated evaluation workflows.
- Designed secure code execution environment with language-specific compiler integration and execution monitoring.

- Built reporting and analytics modules to track coding performance, submission history, and laboratory engagement metrics.
- Developed scalable web architecture using Python, Flask, MongoDB, and AI-assisted programming workflows.

Converter4a PDF Utility Platform

- Developed online PDF utility platform for students and professionals.
- Implemented PDF merge, split, compress, image conversion, and document optimization tools.
- Deployed production-ready application on VPS hosting infrastructure.
- Designed user-friendly interface for document management operations.

Certifications

- AWS Data Engineering Course
- Social Internship
- Cyber Security Awareness
- Effective Presentation Skills
- Data Analytics and Visualization

Achievements

- Presented research paper titled "*Indian Knowledge System and Modern AI Technology Boom: An Analytical Approach*" at an Indian Knowledge System (IKS) Conference, exploring the relationship between traditional Indian knowledge systems and emerging Artificial Intelligence technologies.
- Successfully deployed full-stack web applications on VPS hosting.

Hobbies

- Learning New Technologies
- Cricket
- Software Development
- Exploring AI and Automation Systems