Shikhar Srivastava

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EDUCATION

- **VIT Bhopal University**
  B.Tech — Computer Science and Engineering (CGPA 8.84/10) — 2022–2026

- **Dabble College, Lucknow**
  ISC — Class XII (PCM) 95% — 2022

- **Lucknow Public Schools, Lucknow**
  ICSE — Class X 93.8% — 2020

EXPERIENCE

- **National Informatics Centre (NIC)** — *Lucknow*
  Software Development Intern — Nov 2024 – Dec 2024
  - Built Flask–MySQL e-filing portal for courts, reducing manual workload 40% across five districts after user interviews.

- **HCLTech** — *Lucknow*
  Machine Learning Intern — Aug 2024 – Oct 2024
  - Designed stock-price prediction pipeline (GBR, AdaBoost, RF); achieved $R^2 = 0.96$ on unseen NSE data.

SELECTED PROJECTS

- **Real Time Hospital Resource Management System** — *Winner — SOLVIT '25*
  Streamlit • ARIMA • XGBoost • Firebase — 2025
  - Engineered real-time ICU prediction dashboard reducing 22% wait time across 3 hospitals using ARIMA/XGBoost.
  - Integrated Firebase-based intake forms, resource updates, and admin views with role-based routing.

- **AI Tutor Agent** — *GitHub — Multi-Agent EdTech App*
  Gemini API • Streamlit • SymPy • LLM Routing — 2025
  - Built a multi-agent tutor system with sub-agents (Math, Physics, Chemistry) using Google Gemini API and SymPy tools.
  - Implemented memory context, LLM-based routing, and Streamlit UI; deployed on Railway with full session persistence.

- **Real Time Edge Pest Detection System** — *Winner — TechTrack '25*
  PyTorch • ONNX • Jetson Nano — 2025
  - Deployed CNN model on Jetson Nano using ONNX runtime (<80ms inference); validated sensor-based spray decisions.
  - Added SHAP explainability and offline sync from SQLite to Firebase; trained on synthetic noisy data.

- **Real Time Potato Disease detection using FBEWT and customized VGG** — *Published — MAI Conf.*
  FBEWT • VGG16/19 • Random Forest — 2025
  - Combined FBEWT signal features with VGG embeddings for Random Forest classifier (94% accuracy on 2152 images).
  - Validated with ROC, Violin curve plots, and published research detailing FBEWT-VGG hybrid model.

TECHNICAL SKILLS

- **Languages:** Python, Java,SQL
- **Frameworks:** PyTorch, TensorFlow, Flask, Streamlit
- **ML / AI:** Time-Series, Computer Vision, NLP, Transfer Learning
- **Tools:** Git, Docker, Jupyter, OpenCV

CERTIFICATIONS

IBM Certified Machine Learning Professional (2025)

ACHIEVEMENTS

- **Winner** — SOLVIT Hackathon 2025 *Led 6-member team to 1st place with AI ICU dashboard adopted in 3 hospitals.*

- **Winner** — TechTrack Case Battle 2025 *Built Jetson-based edge pest detector, outperformed 85+ teams, interned at Karagre Robotics*

- **Top 8** — HackerEarth ML Challenge 2024 *Ranked top 2% out of 3,000+ via MAE-reducing ensemble forecasts*

- **Finalist** — Smart India Hackathon 2023 & 2024 *2-time finalist (top 1%) with scalable citizen-service AI solutions*