

Harsh Yadav

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Professional Summary

AI/ML-focused Computer Science undergraduate with hands-on experience building machine learning and deep learning systems using Python, PyTorch, Scikit-learn, Pandas, and FastAPI.

Technical Skills

Languages: Python, JavaScript, TypeScript, SQL, C++

AI / ML: PyTorch, Scikit-learn, Pandas, NumPy, TensorFlow (basic), Deep Learning, CNNs, Feature Engineering, Data Preprocessing, Model Evaluation, Predictive Modeling

Frontend: React.js, HTML5, CSS3, Tailwind CSS, Bootstrap, Vite

Backend: Node.js, Express.js, FastAPI, REST APIs, JWT Authentication

Databases: PostgreSQL, MongoDB, SQLite, MySQL, PostGIS

Geospatial: GeoPandas, Rasterio, Shapely, Leaflet, STAC APIs

Tools & Platforms: Git, GitHub, Docker, Postman, Figma

Projects

AI-Based Galaxy Morphology Classifier | PyTorch, Deep Learning, Python, CNN | Dec 2025

- Built a deep learning pipeline for classifying galaxy morphologies into Spiral, Elliptical, and Irregular categories using SDSS and Galaxy Zoo datasets.
- Built and trained convolutional neural network models for multi-class galaxy morphology classification using SDSS and Galaxy Zoo datasets.
- Implemented lightweight CNN architectures, preprocessing, augmentation, normalization, feature extraction, training, and inference workflows for efficient experimentation and scalable inference.
- Implemented model evaluation workflows for improved training stability and accuracy.
- Developed an end-to-end ML workflow covering data ingestion, model training, evaluation, experimentation, checkpointing, inference, and deployment-ready prediction pipelines.
- Evaluated model performance using validation metrics and optimized training through hyperparameter experimentation.

ClimateRisk Sentinel | React, TypeScript, FastAPI, PostGIS, GeoPandas, Rasterio, Leaflet | May 2026

- Built a geospatial climate-risk intelligence platform using Microsoft Planetary Computer STAC APIs, PostGIS, and open satellite datasets for AOI-based infrastructure analysis.
- Implemented raster analytics workflows including NDVI, NDWI, and NDBI computation with GeoPandas, Rasterio, Shapely, and spatial reprojection pipelines.
- Developed interactive GIS dashboards with Leaflet featuring AOI validation, infrastructure proximity metrics, heuristic risk scoring, and temporal geospatial analysis.
- Optimized backend workflows for scalable geospatial processing and visualization.

ApplyNest | React, TypeScript, Express.js, MongoDB, JWT | Apr 2026

- Built a full-stack AI-assisted job application tracking platform with authentication, Kanban workflow management, and AI-assisted job description parsing.

- Implemented drag-and-drop pipelines, protected routes, schema validation, and persistent application state management.
- Designed deterministic AI fallback logic enabling resume bullet generation and JD parsing even without external API access.
- Improved workflow automation and structured job-tracking efficiency.

Primetrade Crypto Trade Logger | FastAPI, PostgreSQL, React, Docker | Mar 2026

- Developed a high-performance trading position tracker with JWT authentication, portfolio analytics, and automated P&L; calculations.
- Built scalable async REST APIs using FastAPI and async SQLAlchemy with strict user-level data isolation.
- Containerized the application using Docker Compose and implemented modular backend architecture with structured exception handling.
- Optimized API workflows for low-latency portfolio operations.

Experience

Full Stack Development Intern — VibeOps (Remote) | Feb 2026 – Mar 2026

- Built full-stack and production-oriented features using React, Node.js, REST APIs, and PostgreSQL-backed services.
- Designed responsive UI workflows with Figma and implemented scalable frontend-backend integrations.
- Leveraged GenAI tools such as Cursor and GitHub Copilot to improve development speed while maintaining production-oriented code quality and modular architecture practices.

Python Programming Intern — CodeAlpha (Remote) | May 2025

- Built Python and ML-oriented data preprocessing pipelines using Pandas and NumPy, including feature engineering and dataset transformation workflows.
- Trained supervised and unsupervised learning models using Scikit-learn for experimentation and predictive analysis tasks.
- Worked with structured datasets, preprocessing strategies, and model evaluation workflows.

Cybersecurity Intern — Prodigy Infotech (Remote) | Jun 2025

- Conducted vulnerability assessments and manual penetration testing on web applications.
- Documented critical security flaws, risk analysis findings, and mitigation strategies for improving application security posture.

Education

United College of Engineering and Research — Prayagraj, India
 Bachelor of Technology, Computer Science | Oct 2023 – Oct 2027
 CGPA: 7.60/10

Relevant Coursework: Data Structures & Algorithms, Machine Learning, System Design, DBMS, Computer Networking

Certifications & Achievements

- Oracle Cloud Infrastructure 2025 AI Foundations Associate — Oracle
- Full Stack Web Development — GeeksforGeeks (Dec 2025 – Present)
- Codefront 2.0 Hackathon — Team Logic Lords (Google Developer Groups On Campus)
- Elite Coders Winter of Code (ECWoC) — Open Source Participation among 5000+ participants
- DRISHTI: Annual Youth Dialogue 2026 — Hindu College, University of Delhi
- Renaissance-Techspan 2026 Participation Certificate

- Attended DevFest 2025 at United Institute of Technology, Prayagraj — participated in hands-on lab sessions on emerging technology topics.
- Active open-source contributor and self-directed learner with strong interest in scalable backend systems and applied AI/ML.
- Interests: Competitive coding, game development, and AI research.