

# Rohit Sharma

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## ABOUT

Innovative Machine Learning Engineer with expertise in algorithm design, model optimization, and data preprocessing. Skilled in multiple languages and ML frameworks to deliver scalable solutions.

## EXPERIENCE

- **Summer Intern** June 2025 – July 2025
  - *Indian Institute of Technology, Mandi(H.P)*
  - **VLMaps Research:** Contributed to research on VLMaps — a unified embedding space for Visual-Language Navigation (VLN), enhancing cross-modal understanding and improving navigation success rates by 18% in simulated environments.
  - **Unified Embedding Optimization:** Developed and fine-tuned a shared embedding space integrating vision and language features, achieving a 12% increase in cross-modal retrieval accuracy.
  - **VLN Pipeline Enhancement:** Integrated VLMaps into existing VLN frameworks, reducing navigation planning latency by 22% and improving generalization to unseen environments by 15%.
- **ML & AI Intern** June 2024 – July 2024
  - *Ingenix Technology Pvt. Ltd, Gurugram(H.R)*
  - **AutoML Application:** Designed and implemented an AutoML regression application to automate model selection and hyperparameter tuning, improving prediction accuracy by 15% and user engagement by 30%.
  - **SAP AI Integration:** Explored SAP AI capabilities to develop intelligent applications, delivering a prototype that reduced process time by 20%.
  - **Chatbot Development with OpenAI:** Developed a chatbot using OpenAI and Chainlit models, increasing user satisfaction by 25% and reducing response time by 50%.

## EDUCATION

- **Jawahar Lal Nehru Govt. Eng. College** Sundernagar, India
  - *BTech in Computer Science (AI & ML) - CGPA: 7.67* 2022 – 2026
    - **Key Courses:** Data Structures, Machine Learning, Artificial Intelligence, Computer Vision
- **Indian Institute of Technology, Madras** India
  - *BS in Data Science and Applications(Diploma level) - CGPA: 7.00* 2023 – 2027
    - **Key Courses:** Business Data Management, Machine Learning, Tools for Data Science, DBMS

## TECHNICAL SKILLS

- **Languages:** Python, C++, SQL, Java
- **Frameworks:** TensorFlow, PyTorch, Keras, Flask, Streamlit, Langchain, Langgraph
- **Tools:** Git, Docker, VS Code, Jupyter Notebook, N8N
- **Soft Skills:** Problem Solving, Teamwork, Time Management, Communication

## PROJECTS

- **VisionAssist: AI-Powered Assistive Vision for the Visually Impaired (Computer Vision, A.I):** Developed an AI-powered assistive vision system achieving 94.2% object detection accuracy and 89.7% OCR text recognition rate with real-time processing at 30+ FPS. Implemented visual language navigation with text-to-speech functionality and grid-mesh spatial mapping, improving user navigation efficiency by 78% in testing scenarios. Tech: YOLOv8, LangChain, OCR, VLN, N8N (2025)
- **QWACH: Detecting Malicious QR Code & URLs Using AI (Cybersecurity, Machine Learning):** Developed an AI-powered hybrid stacking model to detect malicious QR code URLs, achieving 91.30% accuracy on a real-world dataset. Deployed a Chrome extension enabling real-time detection with over 1,000 QR's and URL's scanned in testing. Tech: Scikit-learn, MLP, Random Forest, Stacking Logistic Regression, KNN (2025)
- **Plant Disease Recognition System with AI-Powered Plant Doctor Assistant (Image Recognition, Machine Learning):** Built a plant disease classifier achieving 91 to 94% accuracy across 38 classes. Integrated a chatbot assistant used by users for real-time diagnosis and treatment suggestions. Tech: TensorFlow, OpenCV, Streamlit, Pillow (2024)

## PUBLICATIONS

**Paper: HybridStack-MLP: Advanced Ensemble Learning for Malicious QR Code and URL Detection:** AI-Powered Hybrid Stacking Model achieved an impressive 91.30% accuracy in detecting malicious QR codes and phishing URLs, demonstrating the potential of ensemble learning in cybersecurity. (2025)

## HONORS AND AWARDS

- **State Level Smart Hackathon** 2025
  - Secured 1st position at SLSH Hackathon Himachal Pradesh presenting Vision Assist.
- **Smart India Hackathon** 2025
  - Secured 1st position twice in college-level SIH competition.

## VOLUNTEER EXPERIENCE

- **Event Organizer for Drama in Fest, JNGEC** Himachal Pradesh, India
  - Coordinated drama events during college fest, organizing rehearsals & overseeing event logistics.
- **Coding Club Vice President at CSE Student Clubs, JNGEC** Himachal Pradesh, India
  - Led a team to organize the coding events, hackathons and coding challenges, impacting students.