

# Yuvraj Verma

Portfolio: [yuvrajverma.me](https://yuvrajverma.me)

Github: [github.com/vermayuvraj](https://github.com/vermayuvraj)

Email: [work.yuvrajverma@gmail.com](mailto:work.yuvrajverma@gmail.com)

Mobile: +91-9455149086

LinkedIn: [Yuvraj Verma](#)

Ayodhya, India

## Education

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- **Rajkiya Engineering College Kannauj** Kannauj, India  
*Bachelor of Technology - Electronics Engineering* Nov 2022 – May 2026  
**Courses:** Digital Electronics, Microprocessors & Microcontrollers, Analog Communication, Digital Signal Processing, Control Systems **CGPA : 7.5**
- **Indian Institute of Technology Madras** Chennai, India  
*Bachelor of Science (Foundation) - Data Science and Application* July 2023 – Sept 2024  
**Courses:** Mathematics for Data Science, Computational Thinking, Statistics, Advanced Python, Artificial Intelligence, Machine Learning

## Skills Summary

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**Languages:** Python, R, C++, C, Java

**ML/DL Frameworks:** TensorFlow, PyTorch, Keras, Scikit-learn, Hugging Face Transformers

**Computer Vision:** OpenCV, YOLOv8, FaceNet, CNNs, Object Detection & Tracking

**NLP & LLMs:** BERT, SBERT, Transformers, Attention Mechanisms, Multi-label Classification, LLM Integration

**Deep Learning Architectures:** ANN, CNN, RNN, LSTM, Transformer, Hybrid RNN-Transformer

**Generative AI:** Model Fine-Tuning, Prompt Engineering, LLM-based Pipelines

**MLOps & Tools:** MLflow, TensorBoard, JupyterLab, Google Colab, NumPy, Pandas, Matplotlib, Seaborn

**Deployment:** Flask, Streamlit, REST APIs, Postman

**Databases and Storage:** Neo4j, SQL

**Soft Skills:** Leadership, team collaboration, problem-solving, adaptability, analytical mindset

## Experience

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- **Vicharanashala Lab for Education Design (VLED Lab), IIT Ropar** Remote  
*Research Intern* May 2026 – Present
  - Researching and deploying scalable AI/ML pipelines on live open-source repositories targeting critical gaps in India's education ecosystem, with direct commit authorship.
  - Under [Dr. Sudarshan Iyengar](#), Associate Professor, Indian Institute of Technology Ropar.
- **Reaching Sky Foundation** Remote  
*Machine Learning and Full Stack Intern* May 2025 – July 2025
  - **Multi-label Classification for Mental Health Detection:** Detected multiple mental health disorders from user posts using BERT, attention mechanisms, and deep learning-based multi-label classification.
  - **Website Management:** Managed and optimized a responsive website using Wix, implementing technical SEO strategies to improve visibility, performance, and user engagement.
- **Codesoft Technologies Pvt. Ltd.** Remote  
*Machine Learning Intern* Apr 2023 – May 2023
  - **Key Outcomes:** Performed exploratory data analysis on large datasets to identify patterns and trends. Built machine learning models for classification and regression problems.
- **BreakOut AI** Remote  
*Machine Learning Intern* Nov 2024 – Jan 2025
  - **Key Outcomes:** Built an AI-powered tool for data and web insights that processes datasets, performs intelligent web searches, and utilizes Large Language Models (LLMs) to extract user-defined information through a streamlined, user-friendly interface.
- **Postman** Remote  
*Student Expert* Sep 2023 – Present
  - **Key Outcomes:** Certified Postman Student Expert with experience in API scripting, workflow validation, and test automation using Postman tools.

## Projects

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- **Face Recognition System using Deep Learning:** Built a CNN-based face recognition model using OpenCV and FaceNet embeddings for accurate identity verification using trained data. **(Apr 2023)**
- **Autonomous Vehicle Driving Safety System using YOLOv8:** Developed an autonomous driving safety system using YOLOv8 for vehicle detection, speed estimation, and collision risk prediction. Integrated computer vision and deep learning techniques for object tracking, proximity analysis, and real-time safety alerts. **(Sept 2024)**
- **AI Tool for Data and Web Insights:** Created an AI-powered data and web insights tool leveraging Large Language Models (LLMs) for dataset processing, web search, and intelligent information extraction. **(Dec 2024)** [GitHub](#)
- **Multi-Label Classification for Mental Health Detection using BERT:** Built a BERT-based multi-label classification model to detect mental health disorders like anxiety and depression from textual data using NLP and attention mechanisms. **(May 2025)**
- **Bikers’ Safety and Hazard Detection using Deep Learning:** Designed an AI-driven system to detect road hazards, lane deviations, and obstacles for biker safety using Deep Learning and computer vision. **(Aug 2025)** [GitHub](#)
- **Model Efficiency Optimization using Hybrid RNN–Transformer Architectures:** Developing a hybrid RNN–Transformer model to enhance language modeling efficiency in low-resource environments by optimizing parameter utilization, memory footprint, and inference latency without compromising accuracy. **(Current)**
- **Transformer-Based Automated Subjective Answer Sheet Evaluation System:** Developed an AI-powered evaluation model capable of assessing descriptive answers using NLP and transformer-based language models (BERT, SBERT). Implemented automated scoring and feedback generation pipeline, reducing manual evaluation time by over 70%. System integrates OCR for handwritten text extraction, semantic similarity for concept-based grading, and web interface for examiner review. Tech: Python, TensorFlow, Hugging Face, OpenCV, Flask, Streamlit. **(May 2026)** [GitHub](#) Tool Link: [AI Grader](#)
- Under **Dr. Ashwini Kumar Upadhyay** (Asst. Prof – REC Kannauj)

## Leadership & Professional Engagement

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- **Training and Placement Coordinator – REC Kannauj** Kannauj, India  
*Conduction of Training programs and on-campus recruitment placement drives.*September 2024 – May 2026
- **Google Student Ambassador – Google Gemini** Google India  
*Led technical outreach for Google Gemini, organizing AI workshops and tool integration.*Sep 2025 – Jan 2026
- **Core Member Google Student Developer Club** GDSC IIT Madras  
*Contributed to developer projects and workshops under GDSC IIT Madras.*Jan 2023 – Dec 2024
- **IEEE Student Member** IEEE Student Branch STB11540  
*Associated with Signal Processing and Computational Intelligence Societies.*Jun 2024 – Jun 2025
- **Event Volunteer – Paradox** IIT Madras  
*Contributed to event execution and management.*Paradox – 2023

## Courses & Certifications

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**Stanford University & DeepLearning.AI:** Machine Learning Specialization, TensorFlow for AI, ML & DL (2024)  
**Google:** Prompting Essentials (2025), Cloud Foundations (2024)  
**Neo4j:** Certified Professional (2025)  
**Postman:** API Fundamentals (2024)  
**LinkedIn Learning:** Generative AI, The Three Pillars of Effective Communication (2025)  
**Coursera:** Foundations of Cybersecurity, Version Control (2023–24)  
**HackerRank:** Python, Problem Solving (2023)  
**IBM:** Data Science

## Achievements

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**India AI Impact Buildathon (GUVI–HCL) – Top 2% National Finalist 2026:** Recognized among the top 2% finalists out of 40,000+ participants nationwide for demonstrating exceptional innovation, technical excellence, and AI-driven problem-solving. [Certificate](#)

## Languages Known

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**English:** Fluent – IELTS Band 6 (B2) • **Hindi:** Native