VARDAAN BAJAJ

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Objective

Aspiring developer and researcher passionate about crafting scalable web solutions and innovating with AI/ML to solve real-world problems.

Education

- **IIIT Naya Raipur**   *Nov 2022 – Aug 2026*
  B.Tech in Data Science and Artificial Intelligence

Related Coursework

- **Deep Learning**
- **Computer Vision**
- **Natural Language Processing**
- **Reinforcement Learning**
- **Time Series Analysis**
- **Data Mining**
- **Calculus**
- **Linear Algebra**

Experience

- **Agrytech Solutions / AI Intern**   *May 2024 – Present*
  Developed an AI pipeline to detect crop health from satellite images. Fine-tuned deep learning models for segmentation and classification, achieving improved model accuracy by 17%. Conducted real-time deployment tests using Flask and FastAPI.

- **Mahyco / Web Development Intern**   *Aug 2024 – Dec 2024*
  Built a scalable system for crop yield estimation using aerial drone imagery. Integrated computer vision techniques (YOLO, image segmentation) to address visual occlusions, enabling accurate prediction and informed decision-making in precision agriculture.

Projects

Hostel Management Website
- Architected a MongoDB-based backend system for efficient hostel data management.
- Built an intuitive and responsive frontend using ReactJS.
- Optimized Node.js backend for real-time data handling and validation.

Crop Detection App
- Designed a lightweight, high-speed crop detection tool using YOLOv5.
- Integrated dynamic image cropping based on user input for enhanced accuracy of 93%.

OOP-Based Web Page Linker
- Engineered an efficient platform using OOP concepts to aggregate multiple web tools into a unified interface.
- Implemented REST API integration and session management for seamless multi-service access.
- Leveraged Scipy and Numpy for efficient data handling and improved performance would be upto 90%.

Publications

- **An Enhanced Object-Oriented Programming-Based Web Page Linker**, IEEE IATMSI 2024

Technical Skills

Languages: Python, JavaScript, C/C++, SQL
Web Technologies: ReactJS, Node.js, MongoDB, Flask, FastAPI, REST APIs, HTML/CSS, TailwindCSS
AI/ML Libraries: TensorFlow, PyTorch, Keras, OpenCV, NLTK, Scikit-learn, XGBoost
Specializations: Computer Vision, NLP, Reinforcement Learning, Model Optimization, Data Pipelines
Developer Tools: VS Code, Google Colab, Jupyter, Git/GitHub, LaTeX, Anaconda, Postman