

DIVYANSHU PRAKASH

 [Codeforces](#)  [Codechef](#)  [Leetcode](#)  [Github](#)

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Education

Indian Institute Of Technology (IIT), Bhilai

B.Tech(Honors)-Mechatronics Engg. (Computer Science Engg)

CGPA - 8.66

October 2022 - May 2026

R.P.S. School

Senior Secondary Education

Grade - 92%

May 2020 - April 2022

Technical Skills

Languages: C++ (Proficient), Python(Proficient), C, Javascript, SQL

Web Stack: Flask, Node.js, React.js, MongoDB

ML/AI: NumPy, Pandas, Matplotlib, Scikit learn, RAG, OpenCV, Computer Vision

Developer Tools: Git, Docker, Github Actions

Core Skills: Data Structures and Algorithms, Machine Learning, Deep Learning, Object-Oriented Programming (OOP), Operating Systems, Computer Networks, Linux, Database Management Systems

Internship

AI & Data Science Intern — Assurant — [Certificate](#)

May 2025 – July 2025

- Built **digital twin simulation system** using **Omniverse Kit and Python** for workflow replication.
- Architected dynamic flows with **OmniGraph, USD, CSV ingestion**, and backend parameter updates.
- Implemented **AI-driven predictive modeling** on Issac-sim and decision support for real-time simulation accuracy.
- Collaborated cross-functionally to align simulation architecture with business analytics and requirements.

AI/ML Intern - IBITF — [Certificate](#)

May 2024 – July 2024

- Project: Automated Recognition and Packaging System for Grocery Items**
- Built a **computer vision system** using **YOLOv8** to recognize **50+ fruit and vegetable types** with **85% accuracy**, improving retail automation and checkout efficiency.
- Employed **SAM AI, DINO AI**, and **Roboflow** for dataset segmentation, labeling, and annotation.
- Developed a **Python Tkinter GUI** for seamless management, with backend support from a **MySQL database** for transaction tracking and data integrity.

Projects

Multilingual DPR Retrieval System with LLM-Enhanced Hard Negatives | *PyTorch, FAISS, Ollama* [GitHub](#)

- Built **Dense Passage Retrieval system** with **LLM-powered negative classification** (87.5% accuracy) and **RAG-augmented ranking**, processing 1000+ multilingual samples with 50% reduction in false negatives.
- Implemented **FAISS-indexed retrieval pipeline**, enabling **cross-lingual semantic search** across 9+ languages.
- Achieved **49.4% MRR@10 improvement** through progressive enhancement, with strong multilingual transfer (**19% zero-shot gain**) validated on 15+ languages

Krishi AI: Precision Agriculture for Plant Health | *Python, Pytorch, YOLO-v5*

[Deployment](#)  [GitHub](#)

- Built plant disease detection system by fine-tuning **YOLOv5** on custom dataset.
- Leveraged **DFN (Deep Fusion Network)** architecture for enhanced feature extraction and classification.
- Processed **26 GB** plant image dataset ensuring robust performance across diverse conditions.
- Achieved **99.14% accuracy**, matching state-of-the-art results (99.6%) from recent research.

Achievements and Activities

- Specialist(1569)** rated at Codeforces.
- Achieved a **3-star (1717)** rating, ranking in the top 0.86% of active users in India on Codechef.
- Team Leader in Inter IIT Tech Meet 2024, Mid Prep 1 (Dream 11 ML model prediction)
- Participated in Dark Pattern Buster Hackathon 2023 - ([Certificate](#))
- Secured 4th rank in the Ingenuity Individual Programming Contest at the college level.

Leadership / Extracurricular

Team Leader | *Mid Prep 1, Inter IIT Tech Meet 2024*

Dec 2024

- Led a team of 6 to develop a Dream11 solution, engineered GRU & XGBoost models (95% accuracy), and crafted React-Flask UIs for model insights and live predictions.

Core Member | *Ingenuity, Competitive Programming Club*

May 2024 - May 2025

- Led a bit manipulation workshop (50+ students, 90% satisfaction), mentored 200+ in Competitive Programming, and organized 10+ workshops/contests to foster CP culture.

Core Member | *Openlake, Opensource Development Club*

May 2024 – August 2024