Indian Institute of Technology Bhilai

Divyanshu Prakash
BTech(Hons) - Mechatronics with specialization in Computer Science and Engineering
Semester: 7
Roll Number: 12240540

Personal Information

- Date of Birth: 05-08-2005
- Present Address: Hostel Kanhar, IIT Bhilai, Kutelabhata, Durg, Bhilai, Chhattisgarh, 491002
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Educational Qualifications

Qualification	Subject / Specialization	University/ Board	Institute/ School	Year of Passing	Discipline	Marks/ CGPA/ GPA
Btech(Major)	Mechatronics Engineering	IIT Bhilai	IIT Bhilai	2026	MT	8.66
Btech(Minor)	Computer Science Engineering	IIT Bhilai	IIT Bhilai	2026	CSE	8.66
12th	Maths	CBSE	R.P.S. School	2022		92.8
10th	Maths	CBSE	R.P.S. School	2020		94.6

Technical Skills

- C++, Python (Expert)
- SQL, Javascript (Intermediate)
- Data Structures and Algorithms, Object-Oriented Programming (OOP) (Expert)
- Machine Learning, NumPy, Pandas, Matplotlib, Scikit learn (Expert)
- Deep Learning, RAG, OpenCV, Computer Vision, Issac Sim (Intermediate)
- Git, Docker, Linux, VS Code (Expert)
- Flask, FastAPI, React.js, Node.js, Tailwind, Bootstrap, MongoDB, SQL (Expert)
- ROS, Solid edge, Gazebo, Fusion360 (Expert)
- Raspberry Pi 5, ESP32, ESP8266, Arduino, Sensors (Expert)

Scholastic Achievement

- Achieved a 3-star (1717) rating, ranking in the top 0.86% of active users in India on Codechef. (2024)
- Participated in Dark Pattern Buster Hackathon 2023. (2023)
- Secured 4th rank in the Ingenuity Individual Programming Contest at the college level. (2023)
- Specialist(1569) rated at Codeforces. (2025)
- Team Leader in Inter IIT Tech Meet 2024, Mid Prep 1. (2024)

Internship

- Assurant (2.1 months)
- Developed simulation components for a digital twin system using Isaac Sim to replicate real-world insurance
  workflows.
- Integrated Python-based simulation logic with 3D environments to visualize claim lifecycle and customer journey.
- Worked with OmniGraph, USD, and Omniverse Kit APIs to build and control dynamic simulation flows.
- Built data-driven logic using CSV ingestion, state machines, and backend-controlled parameter updates.
- Collaborated with cross-functiona

- IBITF (2 months)
- 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.

Position of Responsibility

- Team Leader (December 2024)
  Mid Prep 1, Inter IIT Tech Meet 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 (May 2024 - May 2025)
  Ingenuity, Competitive Programming Club
- 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 (May 2024 - August 2024)
  Openlake, Opensource Development Club

Projects

- Krishi AI: Precision Agriculture for Plant Health (October 2024)
- Constructed a Deep Learning Model: Built a plant disease detection system Fine-Tuning YOLOv11 on custom dataset.
- Leveraged the novel DFN (Deep Fusion Network) architecture to enhance feature extraction and classification.
- Processed 26 GB plant dataset for training, ensuring robust model performance across diverse environmental conditions.
- Achieved 99.14% accuracy, closely matching state-of-the-art results (99.6%) from recent research.

- Sci-Tech Website (August 2024)
- Engineered a Scitech website for IIT Bhilai clubs, facilitating smooth online registrations and providing real-time activity
  updates to over 200 participants weekly while enhancing user engagement by simplifying the process.
- Created a modular design system that streamlined the development process, reducing coding time by 30% and enabling
  faster updates, ultimately equipping over 15 developers with consistent design components for enhanced efficiency

- Portfolio (January 2025)
  -> https://divyanshu-prakash.onrender.com/

- Nurse Bot: Autonomous Mobile Robot for Navigation and Assistance (December 2024)
- Developing an autonomous mobile robot on Raspberry Pi 5 using ROS for real-time mapping and navigation.
- Simulated the IIT Bhilai Health Center in Gazebo for testing SLAM and motion planning.
- Integrated LiDAR, IMU, and depth cameras for localization, obstacle avoidance, and shortest path computation using A*

and Dijkstra's algorithm.
• Implementing an ML model for object detection to enhance environment perception.

Extracurricular Activities

• Cooking, Travelling, Watching Movies
• Painting, Video and Photo editing, Photography, Videography

Strengths

• Multitasking
Public Speaking
Communication skills
Leadership