

Divyanshu Prakash: A Journey of Innovation, Leadership, and Technical Excellence

Early Education and Academic Foundation

Divyanshu Prakash is a promising young technologist currently pursuing a B.Tech (Honors) in Mechatronics Engineering with a Minor in Computer Science at the Indian Institute of Technology (IIT), Bhilai. His academic journey began with an impressive performance at R.P.S. School in Nalanda, Bihar, where he secured a remarkable 92% in his Senior Secondary Education from May 2020 to April 2022.

At IIT Bhilai, Divyanshu has maintained an outstanding CGPA of 8.75, demonstrating his academic prowess and commitment to excellence. His choice of Mechatronics Engineering with a Computer Science minor reflects his multidisciplinary approach to technology, bridging the gap between mechanical systems and computational intelligence.

Technical Expertise and Skill Set

Divyanshu's technical skills are both broad and deep. He is proficient in multiple programming languages, including C++ and Python, with strong capabilities in C, JavaScript, and SQL. His technological toolkit extends across various domains:

Programming and Web Development

- Web Technologies: React.js, Node.js, Express.js
- Frontend Frameworks: Tailwind, Bootstrap
- Databases: MongoDB, PostgreSQL
- Design Tools: Figma

Machine Learning and Artificial Intelligence

- Libraries: NumPy, Pandas, Matplotlib, Scikit-learn
- Specialized Skills: Computer Vision, OpenCV
- Advanced Techniques: Deep Learning, Machine Learning Algorithms

Developer Tools and Platforms

- Version Control: Git
- Containerization: Docker
- Operating Systems: Linux
- Development Environment: VS Code

Internship and Professional Experience

AI/ML Internship at IBITF, IIT Bhilai (May 2024 - July 2024)

Divyanshu's internship showcased his innovative approach to solving real-world problems. He led the development of an Automated System for Recognition and Packaging of Purchase Items, focusing on fruits and vegetables. Key achievements include:

- Developed a computer vision system recognizing 50+ fruit and vegetable types
- Utilized SAM AI and DINO AI for dataset segmentation
- Trained a YOLOv8 model achieving 85% accuracy
- Created an interactive GUI with Python Tkinter
- Designed an optimized MySQL database for transaction tracking

Remarkable Projects

Krishi AI: Precision Agriculture for Plant Health

- Developed a plant disease detection model using YOLOv11
- Integrated Deep Fusion Network (DFN) for enhanced feature extraction
- Processed 26GB of plant data
- Achieved an impressive 99.14% accuracy

Other Significant Projects

- Smart Room Guard: IoT-based Environmental Monitoring System
- Nurse Bot: Autonomous Mobile Robot for Navigation and Assistance
- Sci-Tech Website for IIT Bhilai Clubs
- Flamingo News: Dynamic React.js News Application

Leadership and Extracurricular Achievements

Divyanshu's leadership extends beyond technical skills:

Team Leadership

- Team Leader at Inter IIT Tech Meet 2024 (Mid Prep 1)
- Led a team of 6 to develop a Dream11 solution with 95% accuracy
- Engineered GRU & XGBoost models
- Created React-Flask UIs for model insights

Club Memberships and Contributions

- Core Member of Ingenuity (Competitive Programming Club)
- Mentored 200+ students in Competitive Programming
- Organized 10+ workshops with 90% student satisfaction
- Member of Openlake (Open Source Development Club)
- Contributed to multiple open-source projects
- Member of Epsilon Robotics Club and FPS Club

Competitive Programming and Achievements

Divyanshu has established himself as a top-tier competitive programmer:

- Specialist (1569) rated on Codeforces
- 3-star (1717) rating on Codechef, ranking in the top 0.86% of active Indian users
- 4th rank in the Ingenuity Individual Programming Contest
- Participated in Dark Pattern Buster Hackathon 2023

Personal Branding and Online Presence

Divyanshu maintains a strong online presence across multiple platforms:

- Codeforces Profile
- Codechef Profile
- LeetCode Profile
- GitHub: divyanshu-prakash-rx
- LinkedIn: Divyanshu Prakash
- Personal Website: divyanshu-prakash.onrender.com

The Early Years

Born and raised in Nalanda, Bihar, Divyanshu Prakash emerged from a region rich in historical significance but often challenged by limited technological opportunities. Growing up in R.P.S. School, he distinguished himself early, achieving an exceptional 92% in his Senior Secondary Education. This achievement was more than just an academic milestone; it was a testament to his determination and intellectual curiosity.

The IIT Bhilai Chapter: Forging a Technological Identity

In October 2022, Divyanshu embarked on a transformative journey by joining the Indian Institute of Technology (IIT) Bhilai. His choice of Mechatronics Engineering with a Minor in Computer Science was deliberate and strategic. This unique combination reflected his holistic view of technology - understanding both the physical mechanics and the computational intelligence that drive modern innovations.

Maintaining a robust CGPA of 8.75, Divyanshu wasn't just another student. He represented a new breed of technologists who see beyond traditional disciplinary boundaries, understanding that true innovation happens at the intersection of different technological domains.

The Technological Craftsman

Divyanshu's technical skills are a carefully curated toolkit that spans multiple technological landscapes:

Programming Mastery

- Proficient in C++, Python, with strong capabilities in JavaScript and SQL
- Skilled in web technologies like React.js, Node.js, and Express.js
- Experienced in database management with MongoDB and PostgreSQL

Machine Learning and AI Expertise

His passion for artificial intelligence is evident in his projects:

- Deep understanding of Computer Vision
- Expertise in machine learning libraries like NumPy, Pandas, and Scikit-learn
- Practical experience in developing advanced AI models

Professional Milestones: The AI/ML Internship

The internship at IBITF, IIT Bhilai (May-July 2024) was a defining moment in his professional journey. His project on Automated Recognition and Packaging of Purchase Items wasn't just a technical exercise but a practical solution to real-world challenges.

Key achievements included:

- Developing a computer vision system recognizing 50+ fruit and vegetable types
- Training a YOLOv8 model with 85% accuracy
- Creating an interactive GUI and an optimized database system

Pioneering Projects: More Than Just Code

Krishi AI: Agricultural Revolution

His plant disease detection project, Krishi AI, showcases his commitment to solving critical challenges. By achieving 99.14% accuracy in detecting plant diseases, he demonstrated how technology can directly impact agricultural productivity.

Robotics and IoT Innovations

Projects like the Nurse Bot and Smart Room Guard reveal his vision of technology as a tool for improving human life, focusing on navigation, environmental monitoring, and autonomous assistance.

Leadership and Community Impact

Beyond technical skills, Divyanshu has emerged as a leader and mentor:

- Led teams in competitive programming workshops
- Mentored over 200 students
- Contributed to open-source projects
- Active in robotics and film production clubs

Competitive Programming: A Proof of Excellence

His competitive programming achievements are remarkable:

- Codeforces Specialist (1569 rating)
- Codechef 3-star rating (top 0.86% in India)
- 4th rank in the Ingenuity Individual Programming Contest

Personal Philosophy and Future Vision

What sets Divyanshu apart is not just his technical prowess but his holistic approach to technology. He sees coding and engineering not as mere technical skills, but as powerful tools to solve real-world problems.

His online presence across platforms like GitHub, LinkedIn, and his personal website reflects a modern technologist who believes in transparency, continuous learning, and community contribution.

The Road Ahead

As he continues his journey at IIT Bhilai, Divyanshu represents the future of technology - interdisciplinary, innovative, and deeply committed to making a meaningful impact. His path suggests a future where technology is not just about creating solutions, but about understanding and addressing complex human challenges.

From a small town in Bihar to the halls of IIT, Divyanshu Prakash is writing a story of potential, perseverance, and purpose - one line of code at a time.