

Shivam Kumar Jha

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Experience

Intern, NDRF 8TH bn, UP, India

January 2025 – March 2025

- Problem: To create an **unmanned drone technology for disaster response that can assist over 30 million people affected by natural disasters** in India every year through rapid aerial assessment and relief coordination.
- Strengthened UAV knowledge by building and testing “Rakshak” drone, **achieving above 80% accuracy in obstacle avoidance** using Pix Hawk and by the implementation ADAS modules on Raspberry pi 3B+.

Intern, National Informatics Center (NIC), Delhi, India

July 2024 – September 2024

- Engineered a **full-stack AI/ML authentication module** using **YOLO and Vision Learning model** for the **National Awards Portal**, accessed by **300K+ users**, with a **model accuracy of 89%**, ensuring secure and seamless user validation.
- Streamlined model deployment in a production environment with iterative improvements driven by user behavior and bug fixes.

Intern, Kodacy, Delhi, India

May 2023 – June 2023

- Built and deployed robotics systems for 3+ use-cases (line-following, object-avoidance, RC cars), **reducing error rate by 30% in sensor detection logic**.
 - Strengthened understanding of intelligent systems through the execution of structured modular ML initiatives focused on optimizing robotic functionalities while ensuring reliable performance across diverse environments and conditions using Arduino/ESP-32/Raspberry Pi and ROS.
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Projects

Catalog Craft

<https://github.com/Shivoo29/CatalogCraft/>

- Digitized **1000+ Indian SKUs in 17 languages**, improving catalog search accuracy by **35%** using **voice & OCR-based indexing**, leveraging text, voice, and image input in Indic languages.
- Implemented **bar-code scanning, voice input, YOLO-based item detection, and multilingual chat-bot support**.
- Crafted using **React, Django, PostgreSQL**, and integrated advanced data-handling mechanisms.

Smart LED Display Project

<https://github.com/Shivoo29/Smart-LED-Display>

- **Designed P10 LED board** to stream real-time temp & AQI for 5+ sensors, improving readability for indoor dashboards by **60%**.
- Built a customizable information display system with real-time clock synchronization.

Microsoft ML-Learnings

<https://github.com/Shivoo29/Microsoft-ML-Learnings>

- Documented ML learning and projects from the **Microsoft ML Skilled Challenge**, featuring step-by-step tutorials.
- Gained expertise in **Python, Jupyter Notebooks, Azure ML Studio, Scikit-learn**, and real-world ML model deployment.

Temperature Control System

<https://github.com/Shivoo29/Thermoelectric-Cooling-System>

- Developed a temperature control system using an ESP32, rotary encoder, OLED display, and **PID-controlled Peltier cooler** achieving temperature control within $\pm 1.0^{\circ}\text{C}$ under variable loads.
- Implemented **PWM management and real-time temperature visualization** to maintain precise environmental conditions.

4-Day AI Odyssey

https://github.com/Shivoo29/Amazon_student_resource-is-mine-now-hahahaha — — — —

- Benchmarked 4 SoTA models (**BLIP2, CLIP, LLaVA, Whisper**) with avg. **90%+** accuracy on multi-modal classification tasks. The end result played a pivotal role in optimizing image analysis processes for future projects.
 - Designed a pipeline combining OCR, image captioning, and **visual reasoning under strict competition deadlines**.
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Skills

Programming: C/C++, Java, Python, Kotlin, Rust, C# **Frameworks** **Tools:** SolidWorks, ROS, Ansys, MERN, IoT, PHP **Specializations:** AI/ML, Cybersecurity, Web/App Development, Database Management, Robotics

Education

B.Tech in Computer Science, Maharaja Agrasen Institute of Technology

Expected 2026

- Relevant Coursework: **OOPS in C++/Java, DBMS, DSA, Compiler Design, Operating System**

Kendriya Vidyalaya, R.K. Puram, New Delhi

2010 – 2022

- Achievements: **Math Olympiad (2x Winner), Science Olympiad (1x Winner)**
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Leadership & Activities

- Founding Member and **President of BYTE**, a leading college tech society; organized events and guided research projects.
- **Led teams in 50+ Hackathons**, showcasing leadership and achieving notable successes.
- honed skills in Hackathons **Full-Stack Web/App development, AI/ML, IoT, cybersecurity, robotics**.
- Explored interests in **particle physics** and silicon chip technologies.