

# Priyanshu Dayal

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## Education

National Institute of Technology, Srinagar

*Expected 2027*

B.Tech in Information Technology  
CGPA: 8.72

## Experience

IIT Roorkee Research Intern

Oct 2024–June 2025

- Researched remote sensing image captioning using CNNs, transformer models, and knowledge distillation.
- Developed encoder-decoder frameworks that incorporate edge-aware fusion techniques.

C-DAC, Noida Ethical Hacking and Penetration Testing Intern

Jan–Mar 2025

- Completed virtual internship and training under the Cyber Gyan Project.
- Hands-on exposure to ethical hacking, security auditing, and penetration testing practices.
- View Certificate (PDF)

## Publications

- Priyanshu Dayal, \*et al.\* (2025). *Edge-aware Encoder Fusion for Remote Sensing Image Captioning*. arXiv:2506.09429 [doi.org/10.48550/arXiv.2506.09429]

## Projects

Bottle Detection using YOLOv8

2024

- Built a real-time system for high-accuracy bottle detection using YOLOv8.

Feature Extraction in CNNs

- Extracted global and local features from VGG19 and ResNet152 for detailed image understanding.

Fusion of Two Encoders

- Used multi-head cross-attention to combine VGG19 and ResNet152 features into a unified vector.

Line Follower Robot

Demo

- Designed and built an IR sensor-based line-following robot using Arduino UNO.

## Skills

**Languages:** Python, C, C++, Java

**ML:** Regression, Classification, Remote Sensing Image Captioning

**CV/AI:** CNNs, Transformers, OpenCV, YOLOv8, RNNs

**IoT:** Arduino UNO, Sensors, SoftwareSerial

**Libraries:** TensorFlow, PyTorch, Keras, scikit-learn, NumPy, Pandas

**Tools:** VSCode, Colab, Anaconda, CodeBlocks, Remote Servers

## **Awards and Certifications**

- Winner Robo War Line Following Robot (Techfusion)
- Bug Bounty Coding Event

## **Leadership and Activities**

- Organizer eSports Tournament, Rang-E-Chinar Cultural Fest, NIT Srinagar
- Volunteer Stage Management Team, Techvaganza Technical Fest, NIT Srinagar