

ALOK KUMAR

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🐙 [alok-github](#) in [alok-linkedIn](#)

SUMMARY

I am a passionate developer with expertise in Data Structures and Algorithms (DSA) in C++. Currently, delving into backend development and machine learning to create robust and intelligent systems. With a strong foundation in problem-solving and coding, I aim to build solutions that make a difference.

EDUCATION

University of Engineering And Management, Kolkata, West Bengal B.Tech, Computer Science and Engineering - CGPA: 8.7	2023 - 2027
New Horizon School, Bhagalpur, Bihar - CBSE XI and XII - 70%	2021 - 2022
St. Joseph School, Kahalgaon, Bihar - ICSE X - 86%	2008 - 2020

PROJECTS

- **Bone Fracture Detection:** AI-powered system leveraging Machine Learning techniques for efficient and accurate detection of bone fractures from medical images.
 - Developed an AI model for detecting bone fractures in X-ray images using ResNet, YOLO, and CNN architectures.
 - Preprocessed and augmented medical imaging datasets to improve model accuracy and robustness.
 - Achieved [92% accuracy] for detecting and localizing fractures.
 - Implemented the solution for real-time analysis with potential applications in healthcare diagnostics.
- **Arduino Based ESP32 Surveillance Car:** A project which focuses on classifying images from the CIFAR-10 dataset using a Residual Network (ResNet) architecture.
 - Designed and implemented a Wi-Fi-controlled robotic car using the ESP32-CAM module and L298N motor driver.
 - Enabled remote control capabilities for directional movements (forward, backward, left, and right).
 - Integrated hardware components, including a 4WD car kit, servo motor, and a Pan Tilt Servo assembly.
- **Crop Price Prediction [SIH 2024]:** AI-ML based models for predicting prices of agri-horticultural commodities [Problem Statement ID – 1647]
 - Built a price prediction model using LSTM networks, achieving 96% accuracy on test data
 - Preprocessed time-series data to extract meaningful patterns and trends for improved prediction
 - Optimized hyperparameters and implemented advanced deep learning techniques to enhance model performance
 - Tools & Technologies: Python, TensorFlow, Keras, Matplotlib.

SKILLS

- **Programming Languages:** Python, JAVA, C/C++, JavaScript
- **Web Technologies:** HTML, CSS, React.js, Node.js, Django
- **Tools:** MATLAB, Git, Docker
- **Frameworks & Libraries:** TensorFlow, OpenCV, scikit-learn, Pandas, NumPy
- **Databases:** SQLPlus, MongoDB