

# Raj Bhattacharyya


Bachelor of Technology  
CSE (AI & ML)  
University of Engineering and Management, Kolkata

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## EDUCATION

| Degree/Certificate | Institute/Board                          | CGPA/Percentage | Year of Passing |
|--------------------|--|-----------------|-----------------|
| CSE(AI & ML)       | University of Engineering and Management | 9.43            | 2026            |
| Senior Secondary   | Hariyana Vidya Mandir, Kolkata           | 91%             | 2022            |
| Secondary          | Hariyana Vidya Mandir, Kolkata           | 95.8%           | 2020            |



## EXPERIENCE

- Banao Technologies**  Oct 2024 - Jun 2025  
Flutter App Developer Kolkata, India
  - Developed and deployed a photo and video contest application, accelerating user engagement by 40%.
  - Engineered and optimized a scalable Django backend and AWS architecture, increasing app performance by 35% while reducing server response time.
  - Analyzed user interactions and segmented participation data, strengthening user retention by 25

## PUBLICATIONS

- Precision Forestry: Implementing YOLOv9 for Accurate Tree and Plant Detection** Communicated  
Precision Score 97% Kolkata, India
  - Conceptualized and engineered a deep learning model leveraging YOLOv9 to accurately detect medicinal trees and plants with a 97% precision score.
  - Innovated an AI-driven classification system that strengthened agricultural, conservation, and herbal medicine research by increasing detection accuracy by 45%.

## PROJECTS

- FlowMorph: AI-Powered Optimization for Faster, Greener CI/CD Pipelines** Feb 2025  
Tools: React, Firebase, Docker, Figma, Cloudflare, Slack, GitHub API, GEN AI 
  - Engineered AI-powered GitHub workflow analysis, expediting CI/CD pipeline execution by 35% and reducing cloud costs by 25% through intelligent compute optimization.
  - Automated 90% of performance optimizations which now required minimal setup for deployment.
- NXTGEN Fortress: AI & IoT-powered Smart Home Security and Management System** Feb 2024  
Tools: Nvidia Jetson Nano, OpenCV, Flutter, Firebase, Python, MQTT protocol 
  - Developed and deployed facial recognition and geolocation-based smart locks, improving authentication accuracy to 98% and mitigating unauthorized access attempts by 70%.
  - Implemented real-time monitoring and automated threat detection, enhancing response efficiency by 50% through advanced machine learning and cloud integration.

## SKILLS

- Programming Languages:** Dart, Python, Java, C/C++
- Technologies:** Flutter, React, NextJs, Tensorflow, Pytorch
- Tools:** Github, Matlab, Oracle SQL, SQL Server, Docker

## CERTIFICATIONS

- LinkedIn Learning, Quantum Computing Fundamentals** Mar 2024
- Udemy, The Complete Full-Stack Web Development Bootcamp** Jul 2023
- LinkedIn Learning, React.js Code Challenges** Jul 2022

## ACHIEVEMENTS

- 1st Place at Hackhive Hoopla 2.0 Hackathon at UEM, Kolkata, AI-Based Home Management** Oct 2024
- 1st Place at Ureckon 6.0 UIC Hackathon at UEM, Kolkata, AI-Based Home Security** Feb 2024
- 3rd Place at Devfest 2.0 Hackathon at BITS Goa, AI-Based Emotion Detection system** Feb 2024

## POSITIONS OF RESPONSIBILITY

- App Dev lead, GDG on Campus UEM - Kolkata, India** Dec 2024- Present