

OMKAR DATTATRAY PAWAR

AI and Software Engineer

CONTACT :

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GITHUB

<https://github.com/agent-loop>

LINKEDIN

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SKILLS :

• Programming Languages

Python

Java

C++

• Frameworks & Libraries

React

Angular

Node.js

• Tools & Technologies

Tensorflow

PyTorch

OpenCV

Cloud Computing(AWS)

Machine Learning

• Soft Skills

Problem-Solving

Teamwork

About Me

AI and Software Engineer with proven experience in developing AI models and implementing machine learning algorithms to improve system autonomy. Proficient in **Data Science**, **SQL/NoSQL databases**, and multiple programming languages including **Python**, **Java**, and **C++**. Skilled in Android development (**Java/Kotlin**) and web development (**React**, **Node.js**, **Django**), with hands-on expertise in building applications from concept to deployment. Demonstrated success in integrating AI systems with hardware, enabling intelligent automation and enhanced performance.

Experience

• AI Intern

Indian Army | Mhow, MP
May 2025 – Jul 2025

Built an **AI pilot** system for an autonomous UAV (drone) using Python, **TensorFlow**, and **OpenCV**, advancing defense-grade drone technology. Applied **machine learning** and computer vision algorithms, reaching 78.8% accuracy in navigation and image recognition.

1st in India, 4th globally for UAV AI/ML innovation.

Integrated AI models into embedded drone hardware, improving autonomy, sensor fusion, and real-time decision-making.

Featured Projects

• Women's Safety Echo-Surveillance System

Python • Whisper • IoT • Android • REST APIs • Cloud

Built a wearable IoT + Android app + police interface using Python, Whisper AI, REST APIs, and cloud integration, enabling real-time surveillance, data streaming, and emergency response optimization.

Delivered a 30% faster response time and 45% higher adoption, showcasing full-stack software engineering, mobile development, and AI-driven safety tech.

🔗 Code : https://github.com/agent-loop/motorq_projects/tree/main/Echosafe

• AI-Powered Satellite Image Segmentation for Defense

PyTorch • OpenCV • Deep Learning • Computer Vision • UAVs

Developed a PyTorch CNN model with OpenCV preprocessing for satellite imagery segmentation, achieving 96% precision and 40% faster real-time inference on autonomous drones/UAVs.

Integrated with embedded systems, GPU acceleration, and sensor fusion (LiDAR, GPS, IMU) to improve autonomy, defense analytics, and situational awareness.

🔗 Code : https://github.com/agent-loop/motorq_projects/tree/main/Satellite%20Image%20Segmentation

Education

• B.Tech – Electronics & Computer Engineering

Vellore Institute of Technology, Chennai | **GPA: 8.28** | Expected 2027

• Intermediate (12th, PCM + Informatics Practices)

Army Public School, Kirkee, Pune | **GPA: 8.76** | 2023

• Matriculation (10th)

Army Public School, Kirkee, Pune | **GPA: 9.48** | 2021