

# Saqib Ahmad Bhat

AI Systems Engineer — Founder @ CuraBoticsAI — Medical Robotics

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## Profile

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Computer Science Engineering student focused on designing scalable AI systems integrating computer vision, IoT, and real-time pipelines. Founder of CuraBoticsAI, a healthcare startup building AI-powered medical robotics and automation systems. Strong interest in edge AI, intelligent healthcare systems, and autonomous robotic solutions.

## Education

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**Government College of Engineering, Tirunelveli**

2023 – 2027

B.E. in Computer Science and Engineering

## Technical Skills

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**Programming:** Python, C++, C, JavaScript, PHP, R, Julia

**AI/ML:** YOLOv8, OpenCV, TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas

**Systems & Backend:** Node.js, MQTT, Socket.io, REST APIs, Distributed Systems

**Frontend:** React.js, Tailwind CSS, Vite

**Tools:** Git, Linux, Docker (basic), VS Code

## Projects

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### SmartTrafficAI — Real-Time Emergency Traffic Priority System

- Engineered a real-time AI pipeline using YOLOv8 for ambulance detection with low-latency inference.
- Designed distributed architecture integrating MQTT messaging and real-time socket dashboards.
- Implemented edge-aware processing with metadata-only storage and automated lifecycle management.
- Developed intelligent traffic prioritization using detection fused with routing logic.

### AI-Based Road Pothole Detection System

- Built IoT-integrated system using ESP32, IMU, and GPS for real-time anomaly detection.
- Applied sensor fusion combining vibration signals with vision-based classification.
- Integrated geospatial analytics for automated reporting and monitoring.

### Contactless Vital Monitoring System

- Developed non-invasive cardiopulmonary monitoring using camera-based signal extraction.
- Applied signal processing and ML for heart rate and respiration estimation.

### AI Automation for Linux Systems

- Designed natural language-driven system for Linux automation.
- Integrated intent recognition with command execution pipelines.

### Assistive AI Learning System for Differently-Abled Individuals

- Developed inclusive AI platform for visually and hearing-impaired users.
- Integrated speech recognition, TTS, and adaptive interfaces.

## Experience

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### Founder & AI Systems Lead — CuraBoticsAI

- Founded a healthcare startup focused on medical robotics and AI-driven automation systems.
- Designing intelligent robotic solutions for hospital environments including monitoring, assistance, and workflow automation.
- Developing AI-integrated systems combining computer vision, IoT, and real-time decision-making.
- Leading system architecture, product vision, and end-to-end development of healthcare robotic solutions.

### AI Intern — IBM (Ongoing)

- Working on Cognos Analytics dashboards, frontend data visualization, and AI-assisted insights generation.
- Developing interactive data-driven interfaces and integrating analytics workflows with backend systems.
- Applying AI techniques for data interpretation and automation of reporting pipelines.

### AI & Robotics Intern — Hadron RoboLabs, Greater Noida

- Developed AI-integrated robotics systems with embedded system exposure.

## Achievements

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- First Prize — IBM Hackathon (Naan Mudhalvan Initiative)

- First Prize — Engage Hackathon (Naan Mudhalvan Initiative)
- Winner — Multiple Inter-College Competitions
- Leadership roles in NGO and technical initiatives

## **Research**

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- IEEE Transactions Paper (Under Preparation): AI-Based Emergency Traffic System
- Research focus: Medical Robotics, Edge AI, Healthcare Systems

## **Additional Information**

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### **GATE Qualified**

**Languages:** English, Hindi, Urdu, Kashmiri, Arabic, German, Punjabi