

Kuldeep Sahu

Chhattisgarh, India.

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Robotics Engineer

Relentless and forward-thinking Robotics Development Engineer with 2+ years of hands-on experience designing, developing, and deploying robotic systems in real-world industrial settings. Proven track record of building robust automation workflows, integrating sensor systems, and driving innovative mechanical designs from concept to deployment.

EXPERIENCE

1. Biotech India, Mumbai - Robotics Development Engineer

March 2024 - Till Now

- Spearheaded the development of assistive robotic arms for physiotherapy, managing full-cycle hardware-software integration and control algorithm design.
- Engineered custom TCP/IP-based real-time communication systems between robotic control modules.
- Created CAD models and robotic assemblies for robotic systems to simulate and test the robot on Gazebo.

2. Roboprenr, Bangalore, India - Robotics Engineer and Instructor

February 2023 - February 2024

- Worked on Robot software development (used ROS 2) for a Humanoid Robot and created the documentation of ROS 2.
- Designed all the electronic circuits and mechanical structure of the robot.
- Given training in electronics, embedded C, Autonomous robotics to students and junior engineers.

3. Learn and Build, Rajasthan, India — Robotics Intern

MAY 2022 - JULY 2022

- Worked on 3 different projects - "Edge Detector Robot ", "Fire Fighting Robot" and "Potentiometer Controlled Robotic Arm".
- Learned and deployed Embedded C programming with Arduino.

PROJECTS

1. Mobile robot Platform (personal project)

- Developed a mobile robot integrating AI-based voice recognition and generative AI to create behaviour like humans using ros2 and LLM API.
- Used C/C++ and python to integrate wheel odometry, IMU and Ultrasonic sensor for navigation and path planning.

2. IOT Enabled Fire Fighting Robot (Final Year Engineering Project)

- This robot can be controlled from anywhere via the Internet.
- Webcam enabled for monitoring the situations and for rescue operations.

SKILLS

Technical Skills - Python, C/C++, ROS2, Gazebo, Image Processing, Git, Serial arm Kinematics and Dynamics, **Sensor fusion, Control Systems**, Raspberry pi, ESP32, Embedded Systems Design, Circuit Design, ML, DL, Linux scripting, SolidWorks, 3D printing.

Soft Skills - Speaking Skill, Goal oriented, Future Focused, Creativity, Quick learner, Dedication, Time management.

ACTIVITIES

Participated in National Level Exhibition & Project Competition
OCTOBER 2014 | New Delhi

Successfully Completed National Adventure Programme held at National Adventure Institute
March 2017 | Pachmarhi, M.P.

Participated in State level Painting Competition
November 2013 | Raipur, C.G.

EDUCATION

Chhatrapati Shivaji Institute Of Technology, Durg, Chhattisgarh, India — B.Tech. (Mechatronics)
AUGUST 2019 - AUGUST 2024.

INTERESTS

Robotics, AI, ML, Drawings and Painting, Spirituality.

LANGUAGES - Hindi, English