J P JAIPUNEETH

Artificial Intelligence and Robotics – MTech Student, MSRIT, Bengaluru, India

Email ID: **jaipuneeth.official**@gmail.com | **Contact:** +91-9448311130

Portfolio : jp-portfolio-website-silk.vercel.app/ LinkedIn : linkedin.com/in/jpjaipuneeth/ | GitHub : github.com/jpjp210202

PROFESSIONAL SUMMARY

Postgraduate student in Robotics & AI with expertise in Gen AI, machine learning, computer vision, and IoT automation. Developed advanced projects on Raspberry Pi, Jetson Nano, and ESP32 for real-world mobile robotics applications. Former JSW Steel engineer with industrial automation experience and AI-powered breakdown prediction projects. Passionate about creating intelligent, future-ready robotic systems powered by AI.

EDUCATION

M.Tech at Ramaiah Institute of Technology, Bengaluru	CGPA: 9.59	2024 - Present
B.E at BMS Institute of Technology, Bengaluru	CGPA: 8.33	2018 - 2022
12th Std (Science) at Nagarjuna Vidyaniketan, Bengaluru	Percentage: 76%	2018
SSLC at Nagarjuna Vidyaniketan, Bengaluru	CGPA: 9.0	2016

WORK EXPERIENCE

JSW Steel, Vijayanagar, Karnataka   Aug 2022 – Jan 2025

Assistant Manager, CMD Dept | Cranes & Drives Automation | AI Prediction

- Led team commissioning 35-ton Grab EOT Crane; specialized in ABB, Siemens, Schneider drives for 30–300-ton cranes.
- Reduced crane downtime from 5 hours/week to 0.5 hours/week; earned Exemplary Award for efficiency improvement success.
- Automated TQM and DM workflows with SAP, Excel, Power BI; embedded AI analytics to reduce manual reporting.
- Applied Python, AI/ML models for breakdown prediction, inventory optimization; LSTM-based predictive maintenance for RUL.
- Completed probation 4 months early; fast-track recognition; represented JSW at G20 Summit and Silver Jubilee.

SKILLS

- **AI & Programming**: Python|C|C++|MATLAB|Deep Learning|NLP|LSTM|YOLO|TensorFlow|PyTorch|Gen AI|LLM|Edge AI.
- **Robotics**: Arduino|Raspberry Pi|NVIDIA Jetson Nano|ESP32|ROS2|Roboguide|Autonomous Navigation|Computer Vision.
- **Automation & Tools**: Embedded Systems|VFD|Industrial IoT|PID Control|SAP|Excel|Excel Online|Power BI|Simulink|Data Visuals.

TRAININGS & INTERNSHIPS

POWERGRID Corporation of India Ltd.

Research & Study Intern; Bengaluru, Karnataka   Sep 2021 – Oct 2021

- Studied operations of 400kV GIS and 220kV AIS substations, including RTAMC and SCADA-based monitoring systems, assisted in testing of equipment and cables, understood management and procurement procedures.

Internship Trainee; Bhuj, Gujarat   Mar 2021 – Apr 2021

- Gained hands-on exposure to 765/400/220kV substations and assisted in the commissioning of Gas Insulated Substation extension.

MyCaptain – Business & Youth Rep Programs

Business Development & Marketing Intern   Sep 2020 – Oct 2020

- Completed 2 internships in sales, marketing, and business development, strengthening communication and leadership skills.

PROJECT

AI-Powered Fire Fighting Robot (ongoing)

- Designing a Raspberry Pi-based autonomous robot and a Jetson Nano based fire classifier, with real-time thermal imaging, wireless control, and adaptive AI extinguishing using water and CO_2.

Fruit Detection Robot (Jetson Nano + YOLOv8)

- Built a lawn-patrolling robot with CSI camera stream, YOLOv8 fruit detection on GPU laptop, Flask integration, and obstacle-aware-avoidance navigation.

ESP32 Follower Rover with BLE Tracking

- Developed a 4WD autonomous rover that follows smartphones via RSSI with servo scanning, UART communication, OLED display, obstacle avoidance, and return-to-home capability.

Instrument Classifier (1D CNN)

- Trained a TensorFlow-GPU 1D CNN using time-delay embeddings to classify 10 musical instruments with real-time mic-based detection and offline prediction.

Smart Utility Monitoring

- Developed an IoT-enabled system for real-time monitoring of electricity and water consumption with SMS alerts, automatic load cutoffs, threshold-based anomaly detection, and Power BI dashboards for advanced usage analytics and billing insights.

PAPER PUBLICATIONS & PRESENTATIONS

- "**Real-Time Weld Defects Detection using Yolov8 and hardware implementation on Jetson Nano**" – Paper in progress.
- "**Sarcasm Detection in Conversational Contexts: A Comprehensive Review with Interpretability Insights from Logistic Regression Based Implementation**" – ICMRACC – 2025 – Presented.
- "**A Review on Generative Design in Robotics: A Path Towards Weight Reduction, Energy Efficiency, and Sustainability**" – ICMRACC – 2025 – Presented.
- "**Machine Learning**" – GITAM University International Conference – 2020 – Presented.