RDL Technologies Pvt. Ltd.

IoT SOLUTIONS • AI BASED PPE MONITORING

AI BASED PPE MONITORING SYSTEM

Ensure Safety. Enforce Compliance. Empower Workforce.

Introducing an intelligent AI-powered PPE monitoring solution that helps industries enforce personal protective equipment (PPE) compliance in real time - reducing risk, enhancing safety, and achieving regulatory compliance effortlessly.



WHAT IS IT

An AI-based PPE Monitoring System uses computer vision & machine learning to detect whether workers are wearing mandatory safety gear - in real time, at all critical points, without human supervision.

- Helmet
- Gloves
- Boots
- Face Mask
- Reflective Vest
- Goggles

IDEAL FOR

- Manufacturing Plants
- Construction Sites
- Mining Operations
- Chemical & Pharma Industries

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From live camera feed to actionable compliance data

HOW IT WORKS

A four-step detection pipeline running continuously on every monitored zone



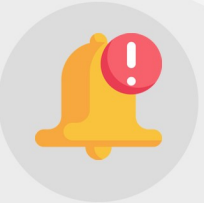
CCTV / Surveillance Feeds
Monitored by an AI model trained for PPE detection.



Worker Detection
Uses facial recognition or RFID / QR codes to identify individuals.



PPE Compliance Check
Real-time analysis determines if required PPE is worn.



Alerts & Reporting
Violations trigger audio/visual alerts and notifications. Reports are logged automatically.

KEY FEATURES

- Real-time PPE Detection.
- Edge & Cloud AI Support.
- Worker Identification (RFID / Face).
- Customizable Safety Rules per Zone.
- Visual & Mobile Alerts.
- Reports & Compliance Dashboards.
- Seamless Integration with ERP / MES.

SMART DASHBOARD

- **Compliance Rate by Department**
- **Violation Logs with Timestamp & Person**
- **Predictive Risk Analytics**
- **Exportable Reports for Safety Audits**

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BENEFITS

Measurable impact for safety teams, operations and finance

Reduce Accidents & Downtime

Meet OSHA, ISO 45001, and Factory Act Norms

Empower Safety Teams with Actionable Data

Cut Costs Related to Injuries and Claims

TECHNOLOGY STACK

- **AI MODELS**
  YOLOv8 / SSD / TensorFlow
- **USER INTERFACE**
  Web Dashboard + Mobile App
- **DEVICES**
  NVIDIA Jetson / Intel NUC / IP Cameras
- **INTEGRATION**
  REST API, MQTT, ERP and MES compatibility

FUTURE READY

- **Smart wearables integration**
- **Voice alert systems**
- **Drone surveillance support**
- **Multilingual dashboard interface**

CASE STUDY

SCAN TO EXPLORE

See it deployed on a live shop floor

Scan with your phone camera to view a real deployment story and results.

www.leanmanufacturing.ai

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