

SMARTPREDICT™ FOR MANUFACTURING

IMPROVE EFFICIENCY,
RELIABILITY & SAFETY

For manufacturers to compete domestically and even on a global scale, responding to marketplace and customer demands is imperative. Essential is the capability to operate manufacturing systems at full capacity and produce quality products in a smartest, most cost effective and efficient way possible.



IOT BIG DATA PROCESSING

NEC's System Invariant Analysis Technology (SIAT) is proprietary AI analytics software that helps in predictive maintenance of machines by using system or IoT data. This is more advantageous than standard reactive or rule-based preventive maintenance system.

PREDICTIVE MAINTENANCE (AI/DX-BASED)

- > Streamlines the monitoring parameters
- > Increases AI system oversight
- > Emulates systems with many sensors and subsystems yet with less complexity
- > Advances AI adoption in machine operations
- > Uses standard system data to model normal machine behavior
- > Monitors relationships across sensors and predicts a breakdown when sensor failures are detected
- > A system dashboard and GUI tools assists in root cause analysis of detected anomalies



VIDEO ANALYTICS SOLUTION

- > Enterprise-level use cases using IP cameras
- > Camera management
- > Thermal sensing
- > Notification and Alert Management
- > Report generation

WORKER PRODUCTIVITY

- > Inactive/no activity monitoring
- > Worker count in relationship to work volume
- > Work station loitering and absenteeism
- > Crowd detection



WORKER SAFETY

- > PPE (mask/clothing) detection
- > COVID-based mask and social distancing detection
- > Intrusion detection in hazardous areas



SITE SURVEILLANCE

- > Perimeter security such as detecting fence climbing
- > Vehicle monitoring such as plate number, speed and congestion detection



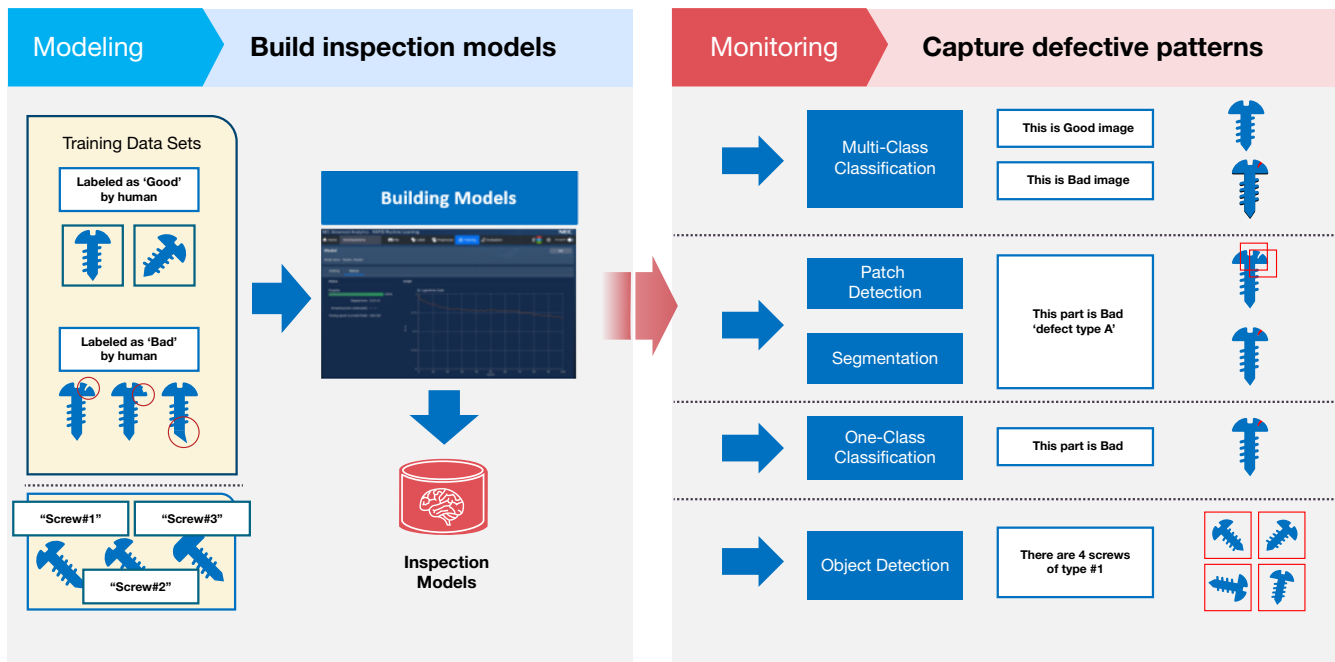


AI-BASE QUALITY ASSURANCE

RML- NEC's-proprietary AI software-assists in automating of visual inspection of products. Deep learning-based RML creates inspection models and digitalizes visual inspection procedures and can be deployed across different factories after the validation of an initial site.

ARTIFICIAL VISION (EXAMPLE BASED MATCHING)

- > Easy adoption of asset inspection rules
- > Additional product images for improved accuracy
- > Robust defect variations
- > Secure training data set
- > Insightful decision-making process
- > Maintains the quality of inspection models and training data sets
- > Handles complex inspections



WHY NEC

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