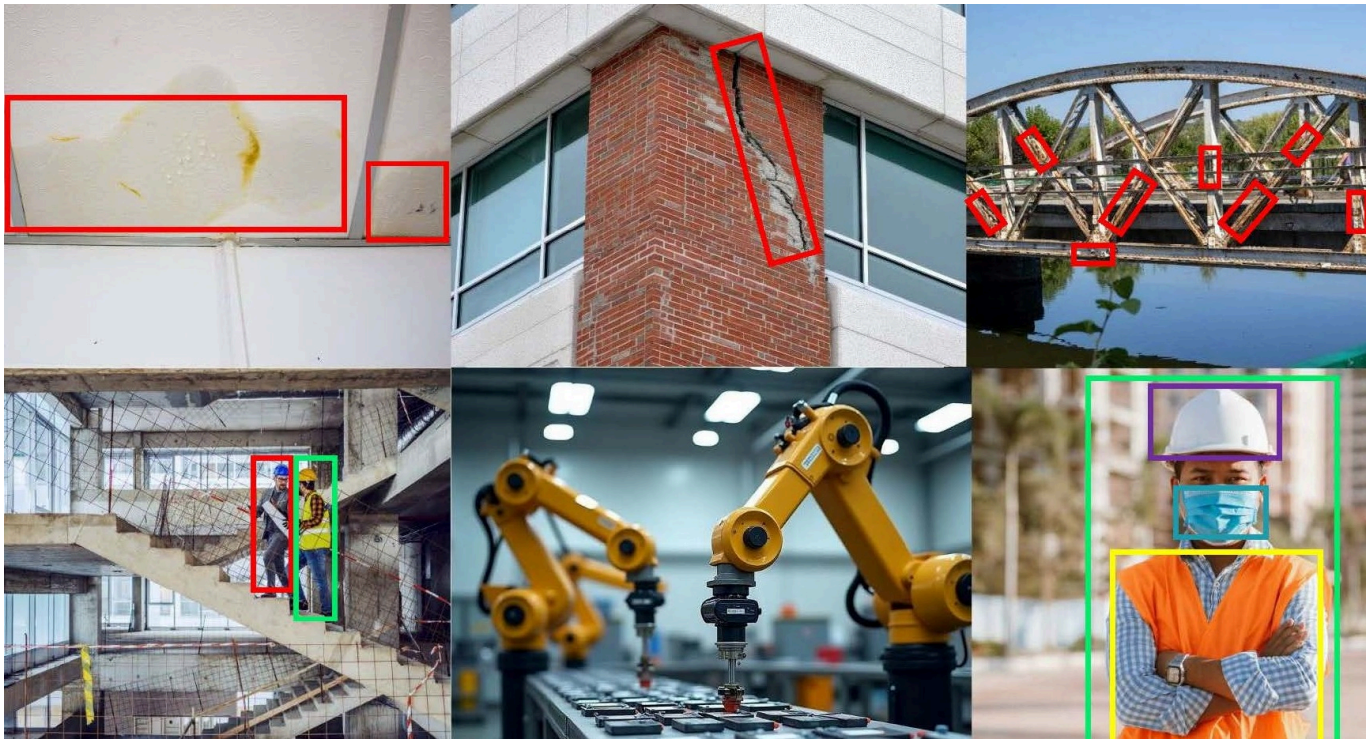
TECH OFFER

Rapid Deployable AI Model for Visual Inspection



KEY INFORMATION

TECHNOLOGY CATEGORY:
Infocomm - Artificial Intelligence
Infocomm - Video/Image Analysis & Computer Vision
Infocomm - Video/Image Processing

TECHNOLOGY READINESS LEVEL (TRL): TRL8
COUNTRY: SINGAPORE
ID NUMBER: TO175443

OVERVIEW

In today's rapidly evolving business landscape, digital transformation has become a strategic imperative for companies across industries. At the core of this transformation lies Artificial Intelligence (AI) – a technology that is increasingly recognised as a key enabler of innovation, operational efficiency, and competitive advantage. As companies accelerate adoption, a rapid deployable approach has become essential, especially for industries seeking an AI visual inspection system that supports automation and fast scaling.

However, despite its transformative potential, AI adoption remains a challenge for many organisations. High development costs, specialised expertise requirements, and complex deployment pipelines often limit AI accessibility to large enterprises with dedicated AI engineering teams. Vision-based AI models, in particular, require extensive training, fine-tuning, and maintenance. Even after initial deployment, continuous retraining are necessary to ensure consistent performance, resulting in substantial costs and resource demands – making automated deployment strategies and rapid deployable AI architectures increasingly valuable.

To overcome these challenges, the technology owner has developed a suite of pre-trained, customisable, and continuously learning AI models that enable rapid deployment for automated visual inspection. Delivered through a modular AI platform, the solution empowers customers to build, customise, deploy and scale AI inspection solutions cost-effectively, without requiring deep AI expertise. The AI models can process both video footage and static images from conventional camera systems, transforming them into intelligent, AI-powered inspection tools adaptable to diverse use cases and acting as a scalable, automated AI visual inspection system suitable for multiple industries.

The technology is available for R&D collaboration, licensing, and test-bedding with industry partners, including system integrators, manufacturers, and inspection service providers.

TECHNOLOGY FEATURES & SPECIFICATIONS

Automated Visual Inspection Capabilities

- Pre-trained, state-of-the-art vision-based AI models with high accuracy
- Automated report generation powered by AI
- Continuous learning capability to ensure high accuracy and consistent performance
- Rapid and customizable deployment to meet diverse inspection needs

Integration with Conventional Camera Systems

- Converts conventional cameras into smart inspection systems
- Compatible with different types of cameras and applications
- Local deployment services to ensure data security and privacy
- On-premise or cloud-based deployment available
- Data stored locally to support continuous learning and performance optimisation
- Ready-to-deploy vision-based AI models for inspection and safety

POTENTIAL APPLICATIONS

This technology offer comprises a suite of visual AI models applicable to various types of visual inspection tasks, including but not limited to:

- Building façade inspection with BCA compliance
- Production line inspection
- Safety monitoring through CCTV
- Construction inspection (i.e. personal safety)
- Interior inspection
- Prohibited zone and compliance checks
- Vehicle Speed Detection
- Wellbeing and behaviour recognition

UNIQUE VALUE PROPOSITION

- **Cost-efficient** pre-trained AI model with high accuracy
- **Rapid deployment and scalability** across multiple use cases

- **Customisable solutions** tailored to different camera systems
- **Cloud-based or on-premises** deployment for flexibility and data sovereignty
- **Continuous learning** ensures sustained accuracy and adaptability over time
- **Accelerates digital transformation** by lowering the barrier to AI adoption