TECH OFFER

Enhancing Construction Safety And Productivity With Video Analytics



KEY INFORMATION

TECHNOLOGY CATEGORY:
Infocomm - Artificial Intelligence
Infocomm - Big Data, Data Analytics, Data Mining & Data Visualisation
Infocomm - Video/Image Analysis & Computer Vision

TECHNOLOGY READINESS LEVEL (TRL): TRL9
COUNTRY: SINGAPORE
ID NUMBER: TO174354

OVERVIEW

Current methods of monitoring construction safety and productivity are tedious, costly and prone to human errors. Resulting in operations being non-compliant, dangerous and inefficient which leads to project delays, cost overruns and even reputational damage.

This technology offers an enhanced safety and productivity tracking solution in the construction industry by leveraging on video analytics to detect safety hazards and high-risk scenarios as well as productivity insights. It provides actionable insights in the form of alerts, charts and reports to enable safety officers and project managers to make better-informed decisions for their operations.

For more information, contact techscout@ipi-singapore.org

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TECHNOLOGY FEATURES & SPECIFICATIONS

This technology is hardware agnostic and is compatible with any IP camera or network video recorder to retrieve and analyze the video feed in real-time and provide alerts that can be sent to various messaging platforms.

A server is deployed to provide the full spectrum of services such as running the software, triggering alerts, as well as the dashboard. This technology is enabled by the large construction datasets that powers object detection and tracking. The current range of detection includes scenarios such as barricade removal, workers working at height or under lifted load, safe distancing, and presence of workers in high-risk zones, PPE and more. Besides the detection of high-risk scenarios, this technology can also track productivity insights such as construction floor progress or precast lifting times.

The deployment period for an existing use-case will take within 2 to 4 weeks and newer use-cases will vary from 2 to 6 weeks depending on the complexity of detection.

POTENTIAL APPLICATIONS

This technology has viable use-cases in providing automated safety monitoring and alerting to other industries such as manufacturing, maritime, oil and gas as well as new use-cases for the construction industry.

MARKET TRENDS & OPPORTUNITIES

Medium to large construction projects are often delayed and experience cost overruns, which can be significantly improved through significant productivity gains, cost savings and early risk identification just by enabling end users to have a better understanding of their operations wherever they are which would make this a very attractive solution.

UNIQUE VALUE PROPOSITION

Main value propositions are:

- Significantly improve safety hazard detection and compliance with automatic 24/7 monitoring
- Increase in productivity by reducing manual site inspections of up to 50%
- Early identification of risks to plan for mitigation
- Reduce human errors and ensure consistency

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