

Enhancing Automatic Incident Detection (AID) Efficiency with CT-ADL Technology on highways and bridges

In the bustling infrastructure composed with outdoor highways and bridges, the deployment of Citilog Applied Deep Learning (CT-ADL) technology within the Automatic Incident Detection system marks a significant advancement in addressing the persistent challenge of false alarms. This case study delves into the integration of CT-ADL technology, highlighting its important impact on operational efficiency and accuracy in a challenging environment.

Project Background

Type of infrastructure: Highways and Bridges

Total number of cameras: 231

Surveillance Equipment: 73 cameras in the most challenging positions, was strategically equipped with advanced CT-ADL technology for comparison.



231
cameras

Challenge Overview

False alarms, primarily triggered by environmental factors such as shadows from the bridge's structure and rain, have historically compromised the surveillance system's efficiency. These alarms demand unnecessary attention from the operational teams, detracting from their main focus on security concerns.

Implementation Strategy:

An analytical comparison was conducted over a **10-day period to evaluate the CT-ADL technology's efficacy**. This involved juxtaposing the performance of CT-ADL-equipped cameras against those lacking this technology, specifically targeting the system's capability to filter out false alarms under various challenging environmental conditions.

Key Findings

Improved Performance Efficiency

CT-ADL technology demonstrated a remarkable ability to filter out 88% of false alarms, significantly alleviating the operational workload.

Valuable impact on Incident Management

A notable reduction in incident management was observed, with an extrapolated figure of 4,878 discarded false alarms across the 73 CT-ADL-equipped cameras over the 10-day analysis.

Enhanced Operational Efficiency

The substantial decrease in false alarms translated into improved operational efficiency, enabling the surveillance team to prioritize real threats and incidents with greater accuracy.

Automatic Incident Detection
with DL filter out

88%
false alarms

Conclusion

The integration of CT-ADL technology within the Automatic Incident Detection system marks a pivotal shift towards leveraging advanced AI solutions to overcome environmental challenges. The technology's success in significantly reducing false alarms not only boosts operational efficiency but also sets a benchmark for future deployments in similar complex environments. This case demonstrates the tangible benefits of adopting adaptive deep learning technologies in enhancing the effectiveness and reliability of surveillance operations.