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Spatial-Temporal Awareness Approach for Extensive Re-Identification

Authors : Tyng-Rong Roan, Fuji Foo, Wenwey Hseush

Abstract : Recent development of AI and edge computing plays a critical role to capture meaningful events such as detection of an unattended bag. One of the core problems is re-identification across multiple CCTVs. Immediately following the detection of a meaningful event is to track and trace the objects related to the event. In an extensive environment, the challenge becomes severe when the number of CCTVs increases substantially, imposing difficulties in achieving high accuracy while maintaining real-time performance. The algorithm that re-identifies cross-boundary objects for extensive tracking is referred to Extensive Re-Identification, which emphasizes the issues related to the complexity behind a great number of CCTVs. The Spatial-Temporal Awareness approach challenges the conventional thinking and concept of operations which is labor intensive and time consuming. The ability to perform Extensive Re-Identification through a multi-sensory network provides the next-level insights – creating value beyond traditional risk management.

Keywords : long-short-term memory, re-identification, security critical application, spatial-temporal awareness
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