

Image Classification on the Edge for Fast Multi-Camera Object Tracking BPP Task 4.1

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July 11, 2018

1 Abstract

This paper introduces a stochastic model for testing a low-latency method of tracking an object as it moves throughout an area observed by a dense network of video surveillance cameras. This new method utilizes the computing power of edge device to run lightweight image classifiers closer to the source of the video data. The sensor redundancy in wide camera networks allows us to increase the accuracy of local lightweight image classifiers to provide for a real-time estimate of a target's location in the sensing region. Running image classifiers on the edge eliminates the need to offload all video data to the cloud and would improve the latency issues inherent to offloading solutions.

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