Quantela

VIDEO ANALYTICS - CAR ANALYTICS

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Problem Definition:

Car analytics using CCVT camera videos is one of the most desired usecase in the Traffic Analysis domain. We have provided a real time solution for the usecase using TensorFlow deep learning library. The model crunches data on GPU. Following are the sub-modules: counting cars, cars moving in wrong direction, traffic signal violation, high speed car detection

Data Input :

Input data is in form of a live video stream

Analysis:-

The four modules mention above all work in conjunction and in real time on the incoming frames. When each of the event is detected, they are written all together in a alert file which can be polled continuously to push alerts to system. Each of the event logs its own alert. A sample alert poller has also been provided to simulate alerts. With each alert, a small video snippet is generated along with other meta information like time, location and speed in case of speed violation.

MODEL -INTRUSION DETECTION

Implementation

1. The user selects a region of interest in case of high speed car

detection, traffic signal violation and also for direction detection.

2. The model then starts on GPU using tensorflow and begins detecting each event.
3. As soon as an event happens, all the details associated with it are logged into a central alert poller which can be polled for sending alerts to platform in real time. Each alert is accompanies a lot of meta information associated with the event.

Installation instructions

Detailed installation instructions are at:
https://github.com/paradigmC/video-analytics/tree/master/video-analytics-api/city/bangalore/realtime_car_analytics

API documentation

Detailed API documentation is at:
https://github.com/paradigmC/video-analytics/blob/master/video-analytics-api/city/bangalore/realtime_car_analytics/Car-Analytics-API-Doc.ipynb