CVT: Lecture 6

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1 Detect traffic light switching

In short, crop the traffic light from the video frame (coordinates are hard-coded, assuming that videoregistrator's position is fixed), then

- take some history window, e.g. number of frames to save to calculate Gaussian
- within history window's Gaussian (you know μ, σ) you can apply each new
  N frames to that Gaussian dist. like:

$$mask = |frame - \mu| > \sigma \tag{1}$$

2 MOG: Mixture of Gaussian models

In short, now when you have multiple mixture of Gaussian models, there is more restriction for mask condition (1), because your sigma is not steep.

```
params = dict(history=300,
              varThreshold=10,  # Mahalanobis distance
              detectShadows=False)
backsub = cv2.createBackgroundSubtractorMOG2(**params)
motion_mask = backsub.apply(frame_data, None, learning_rate)
```