**Methods**

- Feature Attention Module
  Low- and high-level features usually carry different levels of semantic information. Applying the same attention map to different level features is sub-optimal. Thus we use a light-weight segmentation module to produce two kinds of attention maps: **segmentation masks, segmentation features**. And we also employ progressive supervision to produce precise masks.

- Feature Transformation Module
  we enforce features of dark pedestrians to approach that of bright ones.

**Motivation**

At daytime, CNN features at pedestrian region show **high responses** at pedestrian regions, with minimal noise at the background. In contrast, at nighttime, CNN features **fail to trigger high responses** at pedestrian regions while contain much noise at the background, resulting in false negatives and positives, respectively.