

# Weakly Supervised Video Anomaly Detection and Localization with Spatio-Temporal Prompts

## Supplementary Materials

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### 1 IMPACT OF WEIGHTED FACTOR IN OVERALL OBJECTIVE

The weights  $\alpha$  and  $\beta$  balance different objective terms in the overall objective, we evaluate the performance of our method with different weights and show the change of performance in Figure 1. We observe that setting  $\alpha$  and  $\beta$  as (0.9 for UCF-Crime, 1.0 for UBnormal) and 2.0, respectively, is an optimum choice within a certain

range. Generally, when  $\alpha$  and  $\beta$  are selected from the range of  $[0.5, 1.5]$  and  $[1, 3]$ , respectively, our method can achieve the relatively good performance.

### 2 QUALITATIVE ANALYSES

We visualize the qualitative results of our STPrompt in terms of temporal anomaly detection and spatial anomaly localization. The detailed results are presented in Figures 2 to 5.

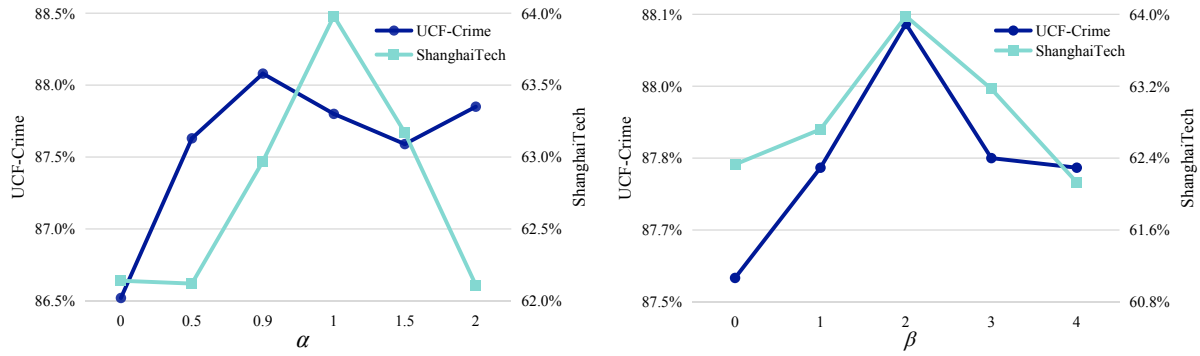


Figure 1: Changes of AUC w.r.t  $\alpha$  (Left) and  $\beta$  (Right) on UCF-Crime and UBnormal.

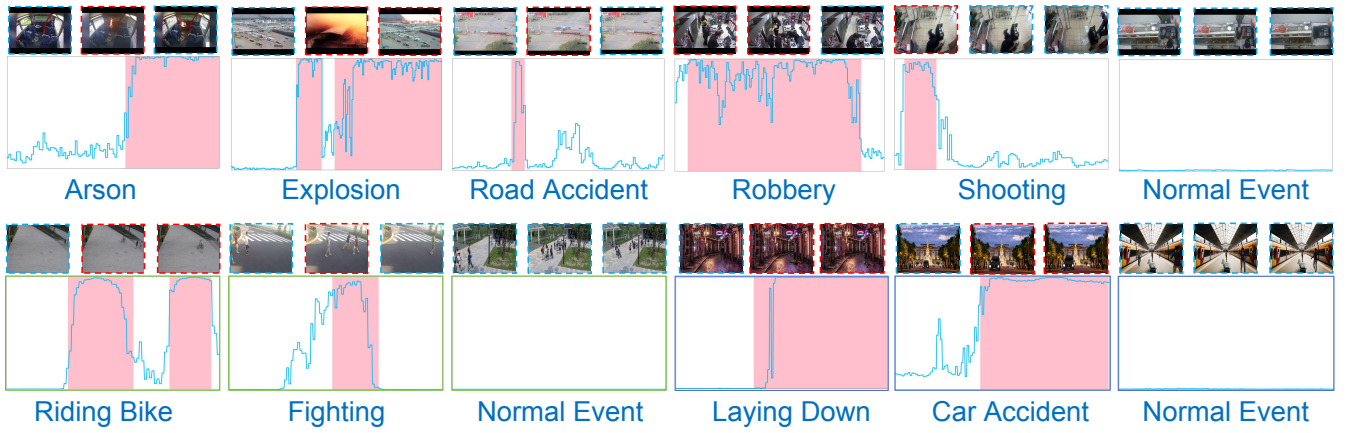


Figure 2: Qualitative results of temporal anomaly detection on UCF-Crime, ShanghaiTech, and UBnormal datasets. The top row depicts the results of UCF-Crime, the first three samples in the bottom row present the results of ShanghaiTech, and the remaining samples show the results of UBnormal. Best viewed in color.

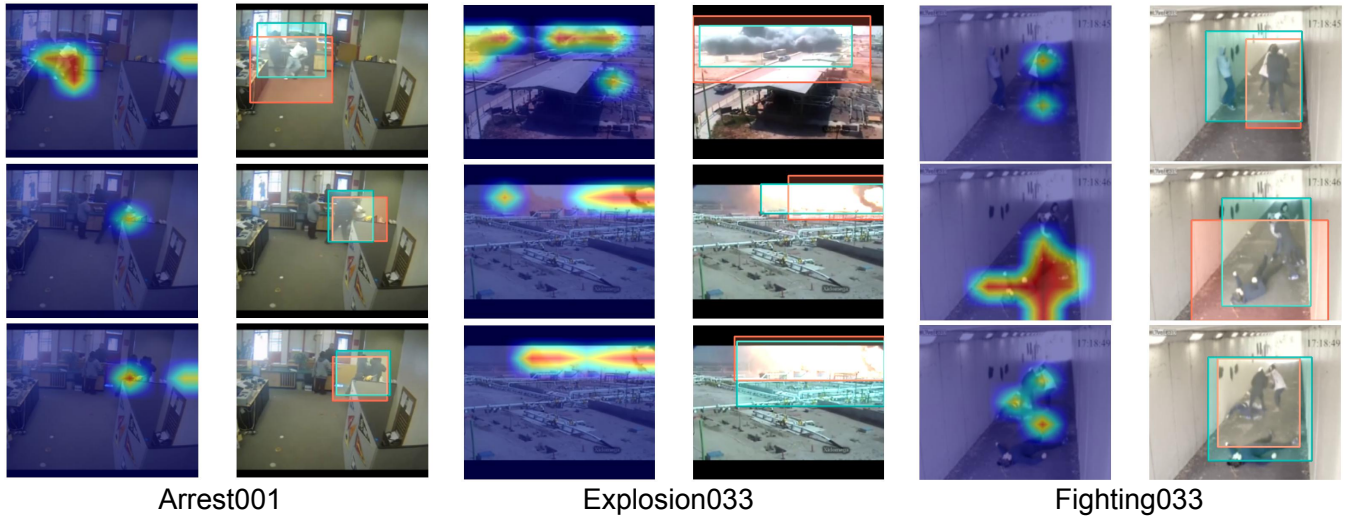


Figure 3: Qualitative results of spatial anomaly localization on UCF-Crime. For each sample, the left column is the anomaly heat map of three video frames in chronological order, and the right column is the corresponding localization bounding boxes (red) and the ground truth bounding boxes (green).

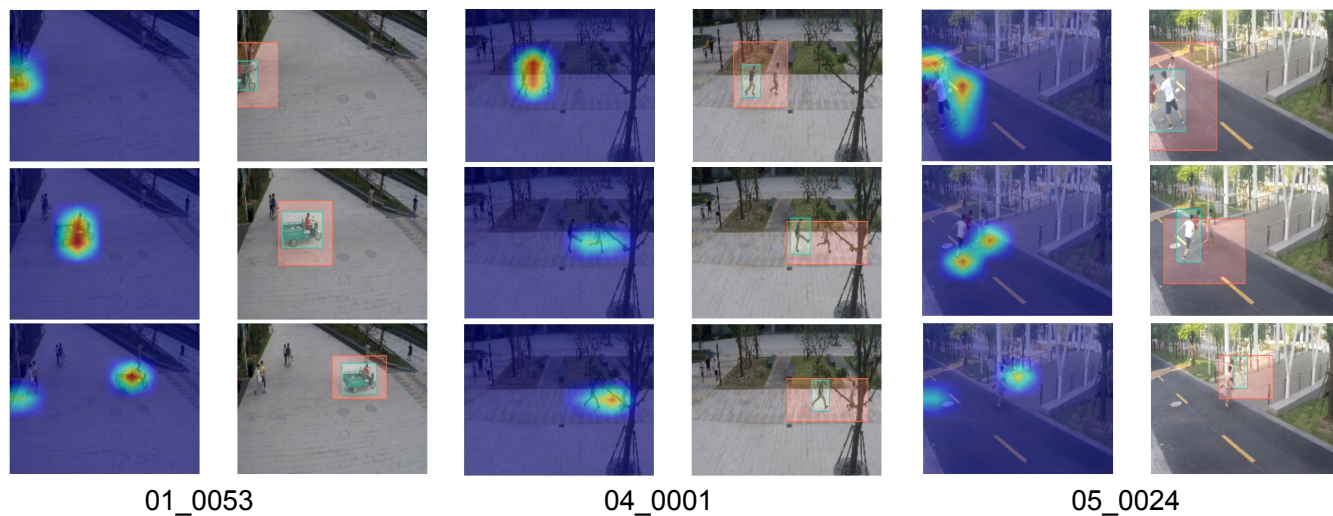


Figure 4: Qualitative results of spatial anomaly localization on ShanghaiTech.

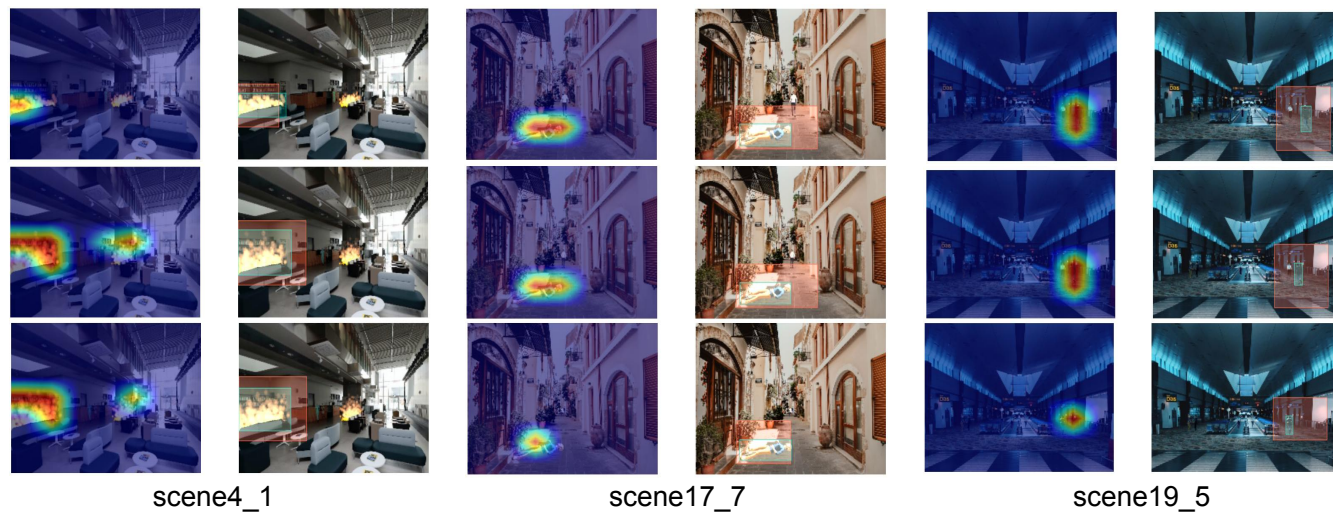


Figure 5: Qualitative results of spatial anomaly localization on UBnormal.