Supporting Material

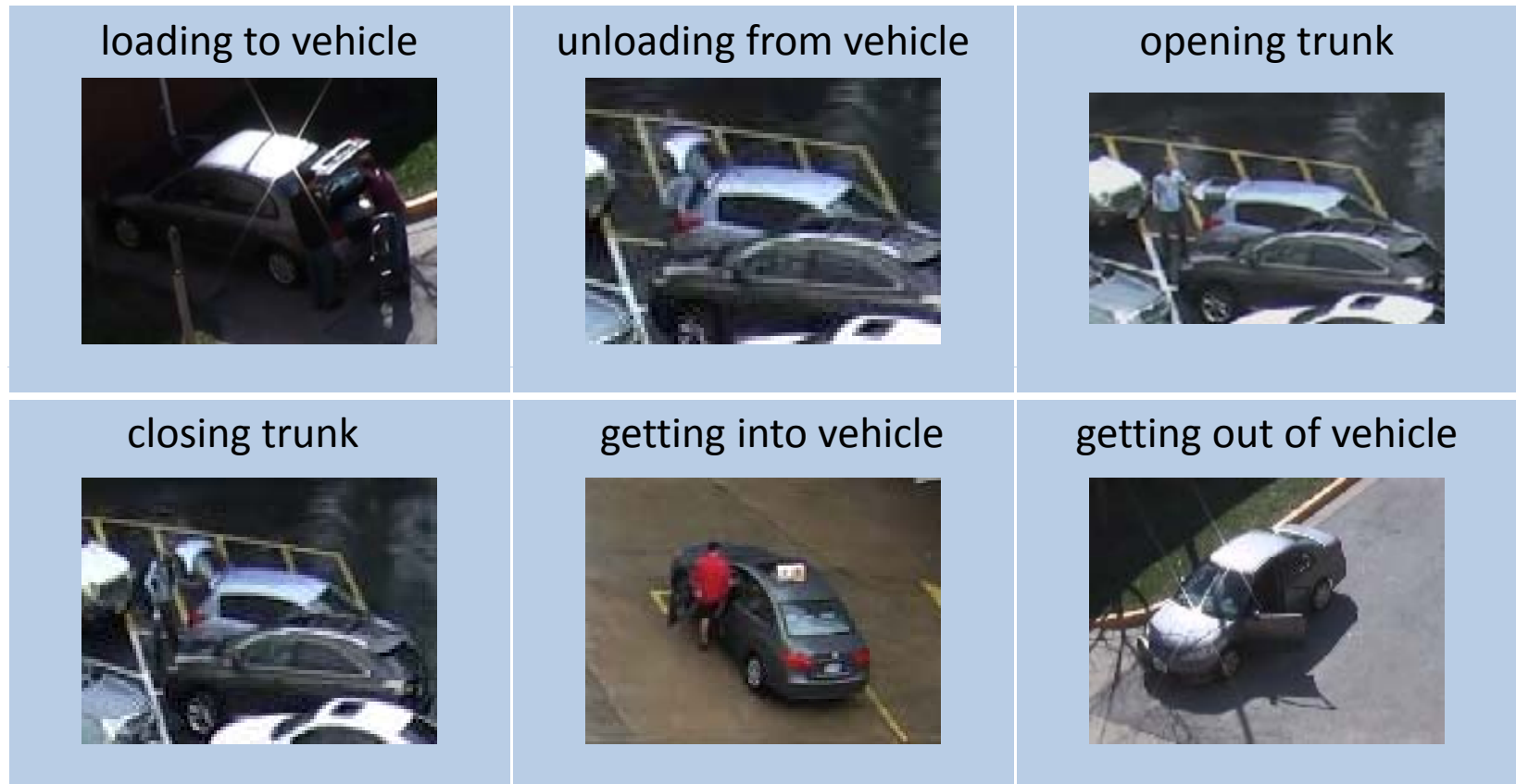for Context-Aware Modeling and Recognition of Activities in Video

Figure 1. Examples of activities incorrectly recognized by SFG method [9], but correctly recognized by the proposed approach (related example results for Figure 7 in Section 5.4 in the paper).
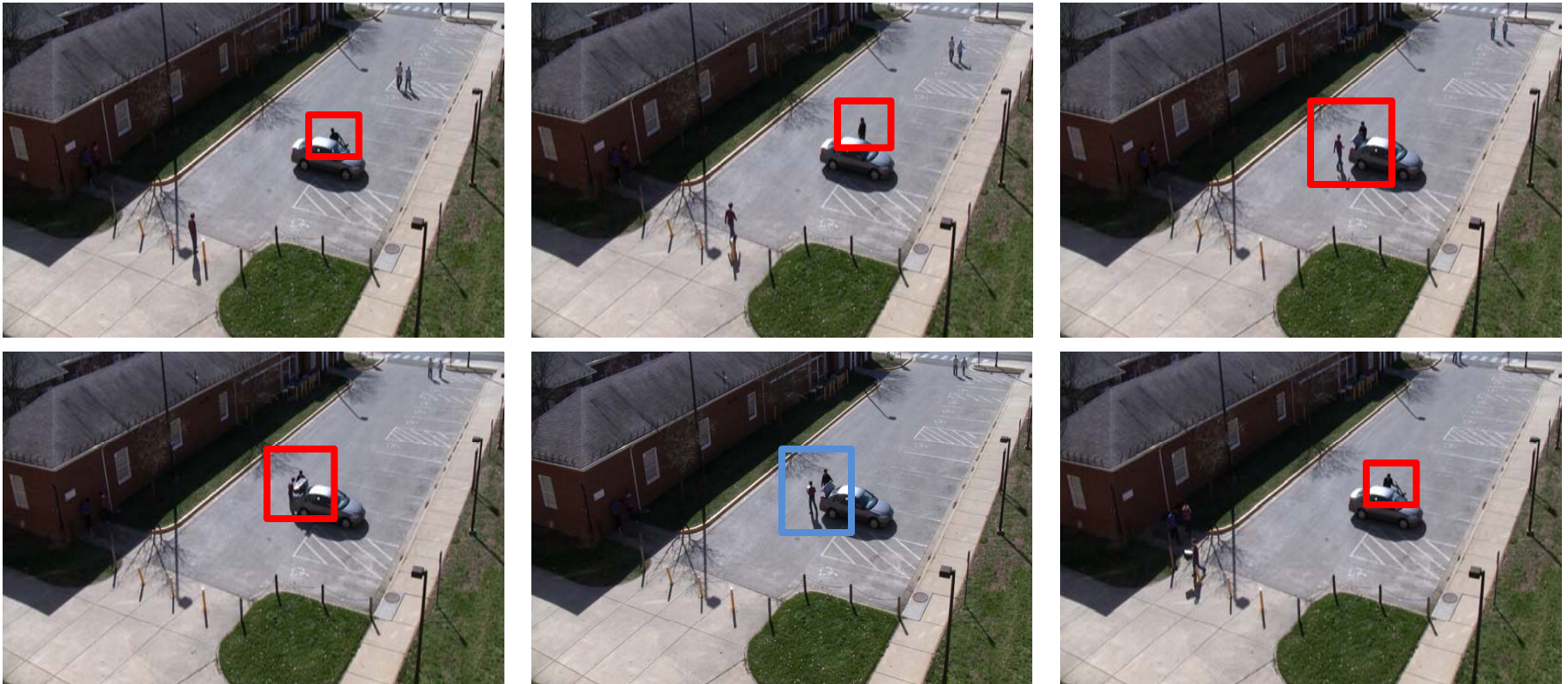
Figure 3. Localization and recognition results on an testing activity set. Red bounding boxes indicate the locations of activities that are correctly recognized. Blue bounding boxes indicate the locations of activities that are incorrectly recognized. The activities (from left to right and top to bottom) are "person getting out of a vehicle", "background activity", "person opening a vehicle trunk", "person unloading from a vehicle", "person closing an vehicle trunk" and "person getting into a vehicle" (related example results for the experiment in Section 5.5).
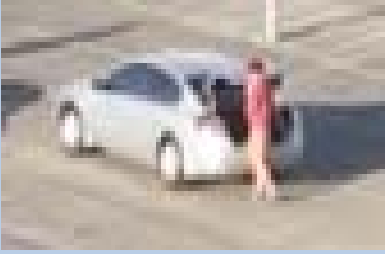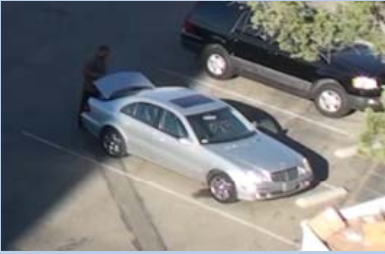
	loading an object	opening trunk	getting into vehicle
Correctly recognized by the baseline classifier (NDM+SVM)			

	unloading an object	opening trunk	getting into vehicle
Incorrectly recognized by the baseline classifier, but rectified by using intra-activity context feature			

	getting out of vehicle	closing trunk	getting into vehicle
Incorrectly recognized by the baseline classifier + intra-activity context, but rectified by using inter-activity context feature			

Figure 2. Examples show the effect of context features in recognizing activities that were incorrectly recognized by the baseline (NDM+SVM) classifier (related example results for Section 5.5 of the first six activities defined in VIRAT Dataset Release 2).

	entering a facility	person running	carrying an object
Correctly recognized by the Baseline Classifier (NDM+SVM)			
Incorrectly recognized by the baseline classifier, but rectified by using context features			

Figure 4. Examples show the effect of context features in recognizing activities that were incorrectly recognized by the baseline (NDM+SVM) classifier (related example results for Section 5.5 of the additional five activities defined in VIRAT Dataset Release 2).