

• Supplementary File •

# Domain Generalization with Semi-Supervised Learning for People-Centric Activity Recognition

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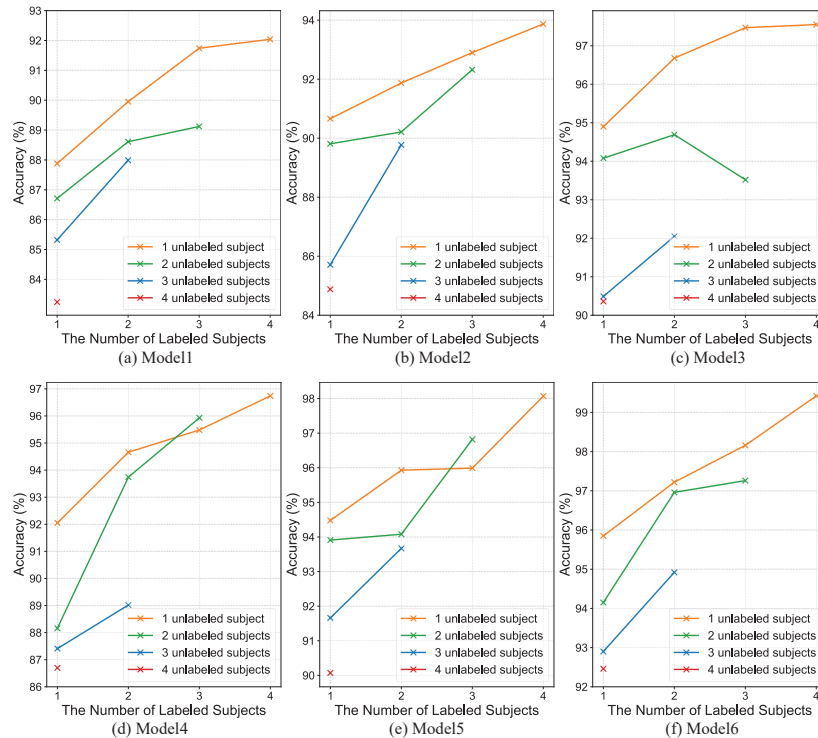
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## Appendix A Analysis of Models 1 ~ 6 on different unlabeled and labeled subjects

While the key results are presented in the main paper (M), here we provide some additional experimental results that could not be included in M due to space constraints, which further corroborate the findings in M. We quantitatively analyze the performance of Models 1 ~ 6 on UAH dataset with different unlabeled and labeled subjects, i.e., verifying whether the performance improvement of these variants is consistent with the variation in the number of training samples, and the results are shown in Figure 1. Models 1 ~ 6 are defined in line with Subsection 4.5 of M, and all parameters are set to the default values in Subsection 4.6 of M. In such cases, the performance of the model (e.g., Models 1, 2, 4, 5 and 6) basically increases with the number of labeled subjects, which indicates that increasing the training sample of labeled subjects helps to improve the representation learning of the model. However, there is an exception (Model 3) where the model performance only gains marginally or even decreases with the increase of unlabeled samples when the number of labeled subjects > 2. The reason may be that the last added unlabeled domain (U6) has a relatively large domain difference with the target domain (U1), and Model3 which excludes the adversarial training module, can hardly alleviate this problem and thus degrade the performance.



**Figure 1** Ablation study of labeled and unlabeled subjects on UAH dataset. Here, we select 5 subjects (U2 ~ U6) for training and U1 is set as target domain. The X-axis indicates the number of labeled subjects, and the colored lines indicate different numbers of unlabeled subjects.

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