








GroupDiff: Diffusion-based Group Portrait Editing Supplementary Files

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1 Visual comparisons for ablation study

Training Data Generation. The result of “Random Mask” is shown in the fourth column of Fig. 1. The model trained with the random mask is not able to repose the inserted person. Our model can successfully repose the inserted person as indicated in the skeleton map. The result of “Mask One Person” strategy is shown in Fig. 1. The model has the capability of reposing the inserted person. However, the model fails to complete the lower body of the inserted person as the model is always fed with the exemplar image having the same body components as the target image. By contrast, our model can successfully complete the lower part with reasonable content.

Person-aware Appearance Preservation: Without “inter-person guidance” (*i.e.*, without the whole person-aware module), the results are shown in the fourth column of Fig. 2. In the first example, without the whole person-aware module, the model cannot successfully condition the skeleton pose. The right hand of the man is not in the correct place. In the second example, without the person-aware module, the model confuses the appearance of the neighboring person, and the lady on the left wears short-sleeve upper clothing, which is not consistent with the original exemplar image. However, with inter-person guidance (result in the fifth column and the last column), the model can successfully transfer the correct clothing from the exemplar image. The intra-person guidance is introduced to enhance the capability of the model to change the pose of the inserted person. As indicated in the first example in Fig. 2, without intra-person guidance, the model cannot successfully repose the left hand of the man. After introducing the intra-person guidance, the model can place the hands of the inserted person in the correct place.

2 More Qualitative Results

In Fig. 3, Fig. 4 and Fig. 5, we show more visual results generated by our proposed GroupDiff.

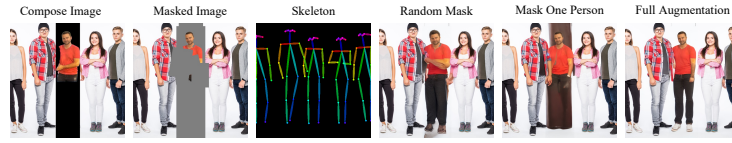


Fig. 1: Ablation Study on Training Data Generation.

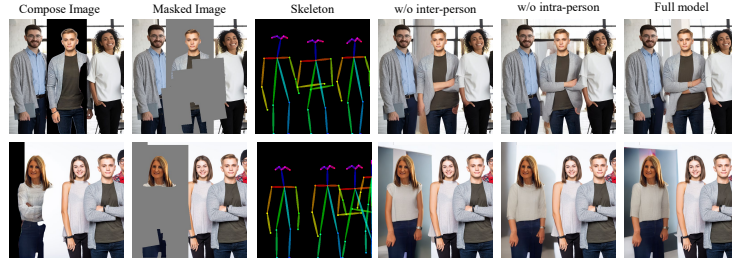


Fig. 2: Ablation Study on Person-aware Appearance Preservation Module.



Fig. 3: More Visual Results on Editing Existing Person.

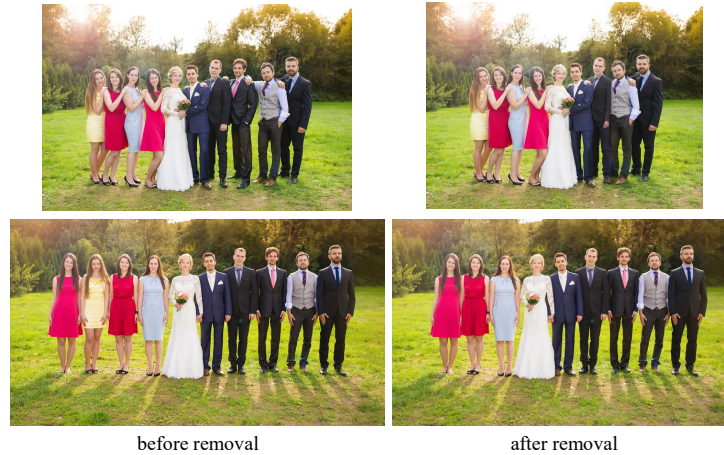


Fig. 4: More Visual Results on Person Removal.

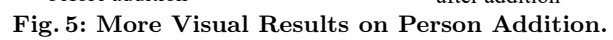


Fig. 5: More Visual Results on Person Addition.