

# Efficient 3D-Aware Facial Image Editing via Attribute-Specific Prompt Learning (Supplementary)

Amandeep Kumar<sup>\*1</sup> Muhammad Awais<sup>\*1</sup> Sanath Narayan<sup>2</sup>  
Hisham Cholakkal<sup>1</sup> Salman Khan<sup>1</sup> Rao Muhammad Anwer<sup>1</sup>

<sup>1</sup> Mohamed bin Zayed University of Artificial Intelligence, UAE

<sup>2</sup> Technology Innovation Institute, UAE

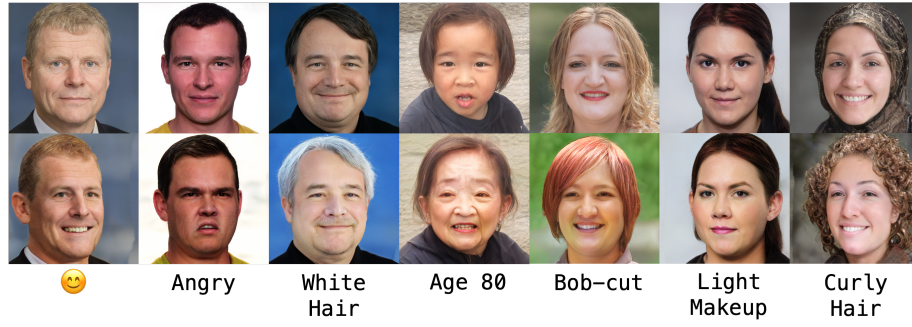
## 1 Extended Experimental Results



**Fig. 1:** One model to edit multiple attributes. We train shared style mappers and individual style tokens for each attribute. This shows how our method can enable multiple attributes in one model.

Here, we present the extended results of our work. First, we present how a single model with dedicated style tokens can edit multiple attributes in Figure 1. Then we show the ability of our model to edit the real image from the CelebA-HQ dataset at different camera poses in Figure 2. Second, we show the result of editing for two opposing expressions, happiness, and sadness, in Tables 1. For this editing, we simply use happy faces and sad faces and compare generated images of the 3D Generator and our method. The results show the success of our model in editing expressions while keeping the identity and camera poses. Third, we show the results of editing different hair colors with our method in Table 2. Finally, to show our method’s ability to preserve identity across camera

<sup>2</sup> Authors contributed equally. Contact information for Amandeep can be found on his page at his [homepage](#), and for Awais, at [homepage](#).

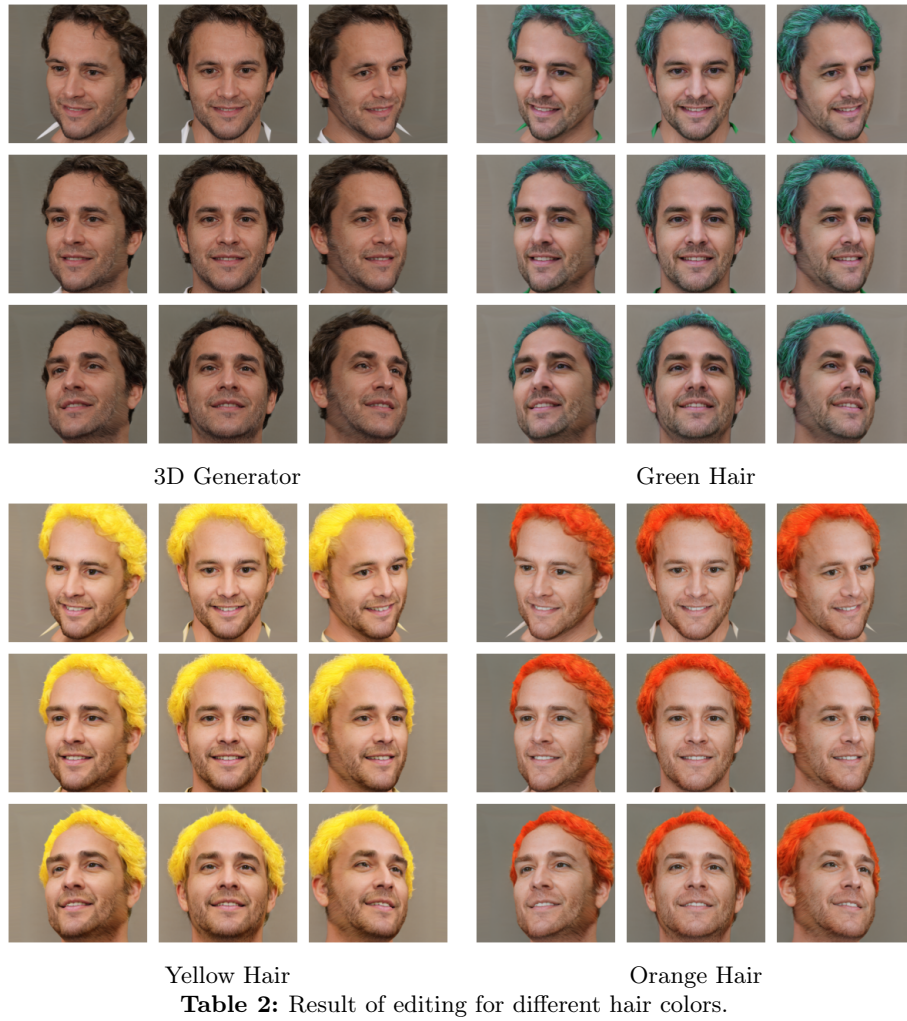


**Fig. 2:** We present the editing ability of our model in real images on CelebA-HQ dataset at different camera poses.

angles and attributes, we present extended results for Figure 1 of the main paper in Tables 3, 4, 5, 6, 7, 8. Specifically, for each face in Figure 1, we present results at 9 different camera poses.



3D Generator                      Ours (Sad Face, Happy Face)  
**Table 1:** Result of two expressions: Sad face and Happy face.



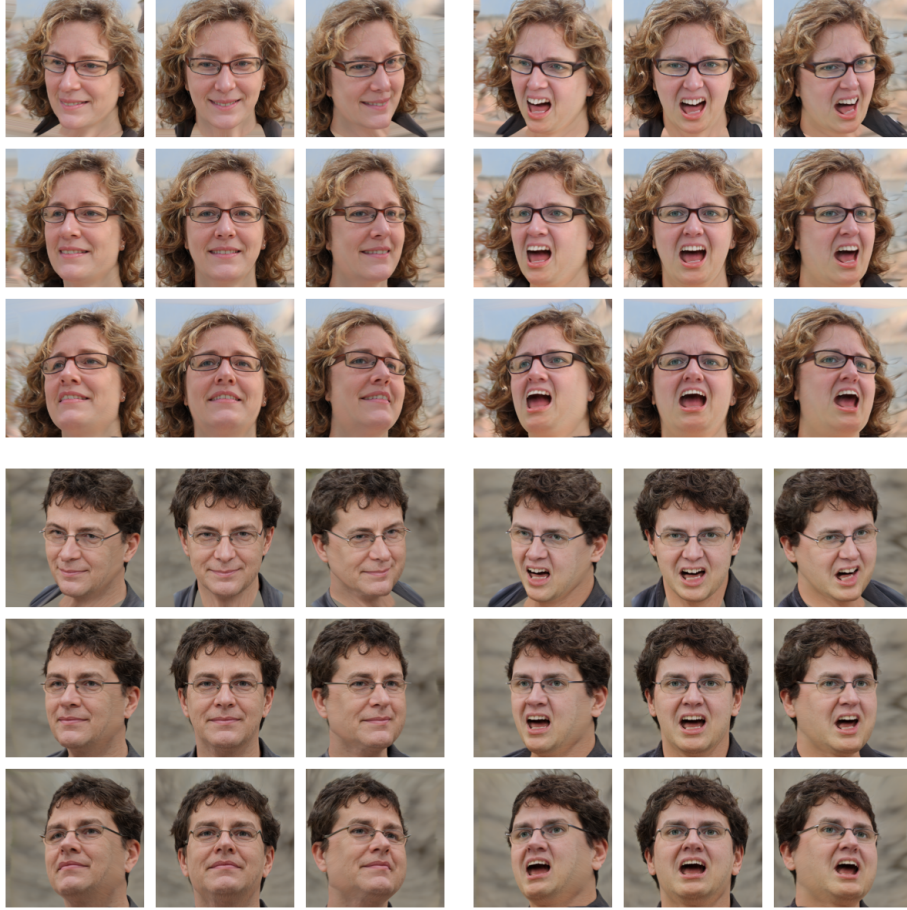




3D Generator

Edited (Ours) with Prompt:

**Table 3:** Extension of our introduction figure (Figure 1) across 9 different camera poses. This is the result of editing with the prompt: :) Face.



3D Generator Edited (Ours) with Prompt: Shocked Face  
**Table 4:** Extension of our introduction figure (Figure 1) across 9 different camera poses. This is the result of editing with the prompt: Shocked Face.



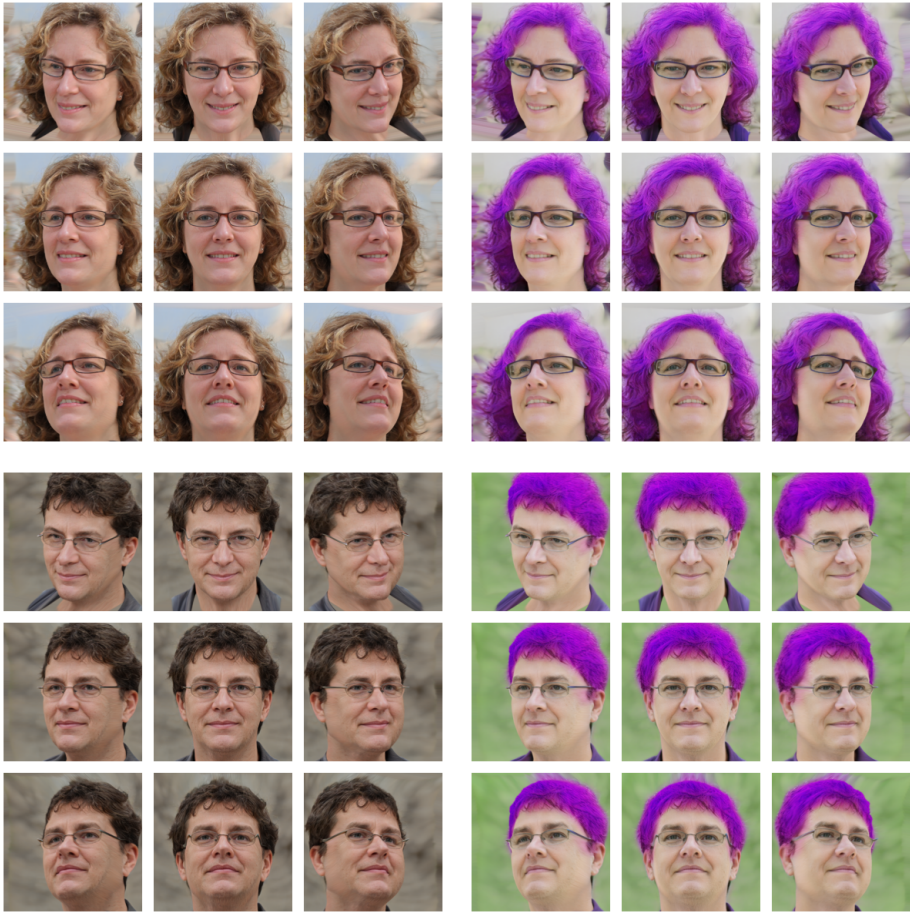
3D Generator                      Edited (Ours) with Prompt: Surprised Face  
**Table 5:** Extension of our introduction figure (Figure 1) across 9 different camera poses. This is the result of editing with the prompt: Surprised Face.



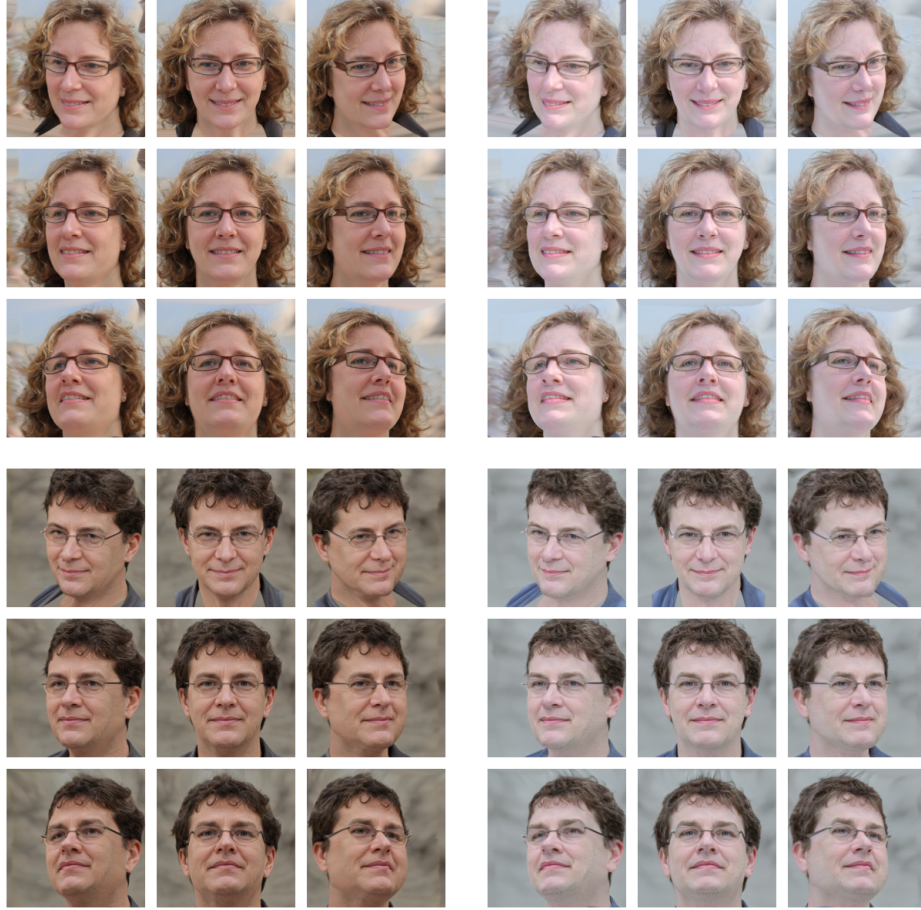


3D Generator Edited (Ours): Woman at age 80 Face  
**Table 6:** Extension of our introduction figure (Figure 1) across 9 different camera poses. This is the result of editing with the prompt: Woman at age 80 Face.





3D Generator                      Edited (Ours) with Prompt: Purple Hair  
**Table 7:** Extension of our introduction figure (Figure 1) across 9 different camera poses. This is the result of editing with the prompt: Purple hair.



3D Generator Edited (Ours) with Prompt: Pale complexion  
**Table 8:** Extension of our introduction figure (Figure 1) across 9 different camera poses. This is the result of editing with the prompt: Pale complexion.