

# Supplementary Material of Fantastic Style Channels and Where to Find Them: A Submodular Framework for Discovering Diverse Directions in GANs

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## 1. Background channels

Background is one of the most popular types of edits offered in stylespace. Figure 1 shows various background channels in stylespace retrieved.

## 2. Different Options for SeFa

SeFa [1] uses different layer options when producing the directions. We chose the option 6-13 for comparison since it offers the most semantically meaningful edits compared to other options. We list other options in Figure 4.

## 3. Interactive Editing

Additional samples for filtered clusters based on a region specified by the user is shown in Figure 2.

## 4. Style Atlas Platform

A view of the stylespace exploration platform where each group represents a different region, such as *nose* or *eyes* is shown in Figure 3.

## References

- [1] Yujun Shen and Bolei Zhou. Closed-form factorization of latent semantics in gans. *arXiv preprint arXiv:2007.06600*, 2020.



Figure 1: Various background channels in the style space retrieved based on the heatmap on the upper left.

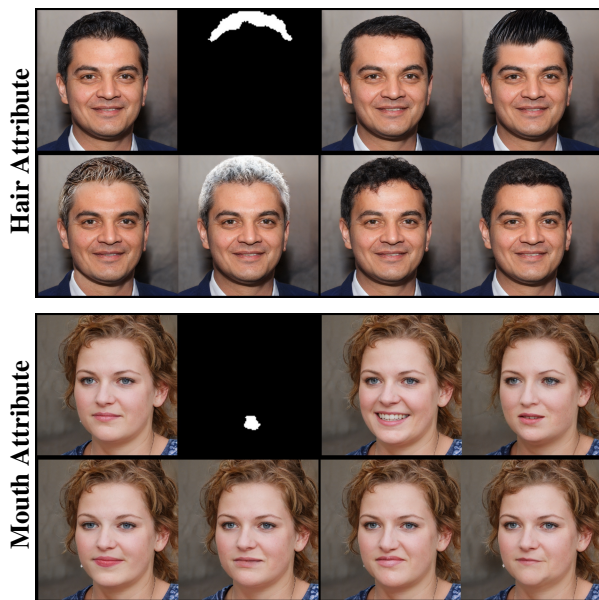


Figure 2: **Filtered clusters based on a region specified by the user.** The two images in the upper left show the input image and the region specified by the user, while the other images show a randomly selected channel from each retrieved cluster.

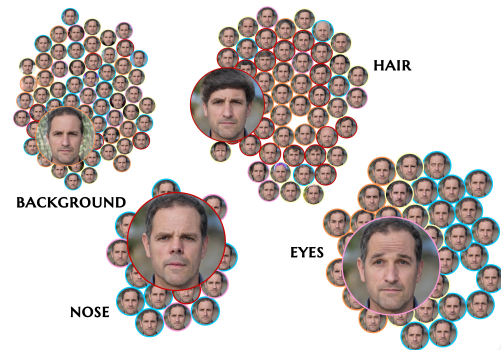


Figure 3: A view of the stylespace exploration platform where each group represents a different region, such as *nose* or *eyes*. The bubbles represent manipulation done by a particular channel. The colors around the bubbles represent different layers (zoom for better view).

