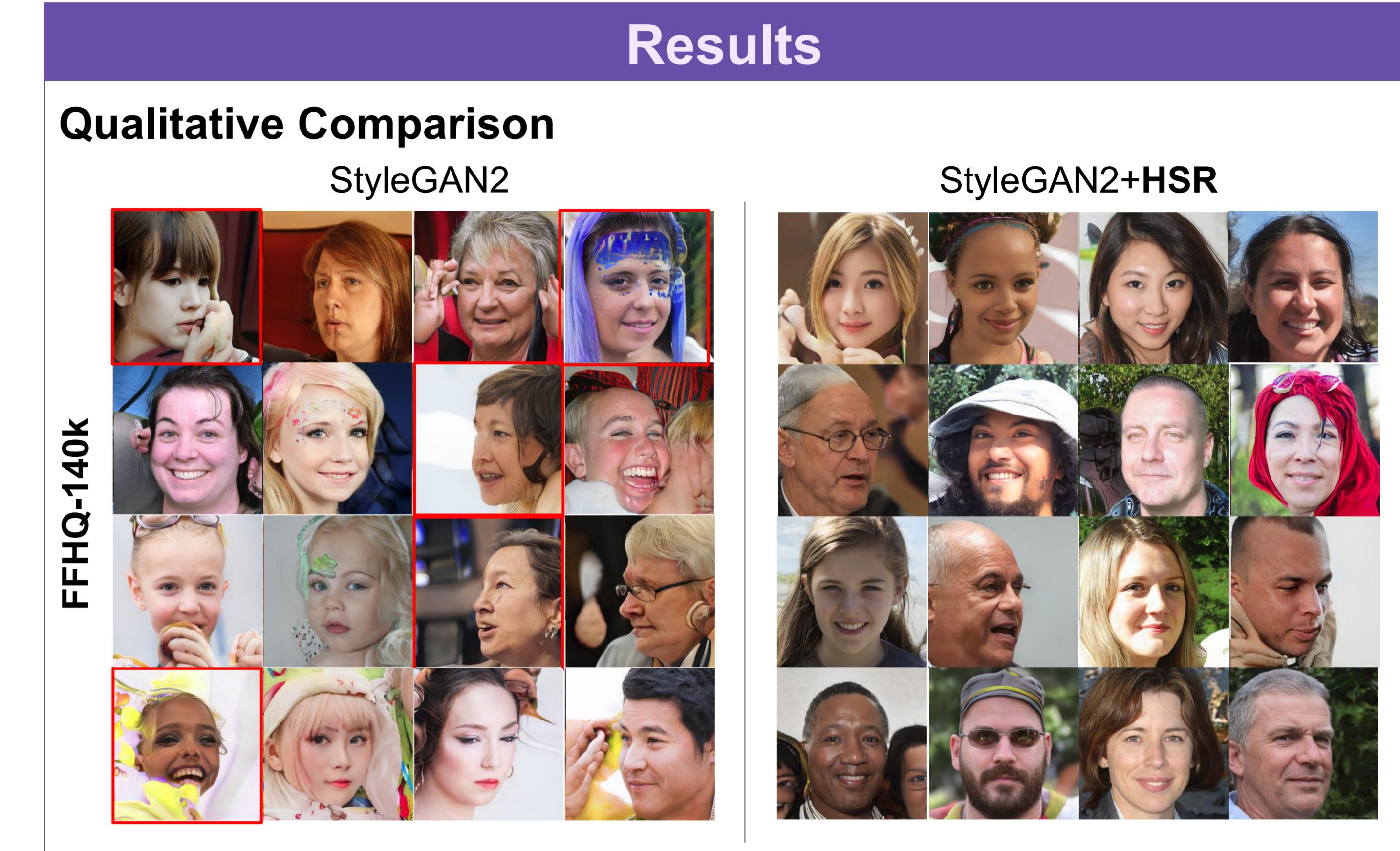
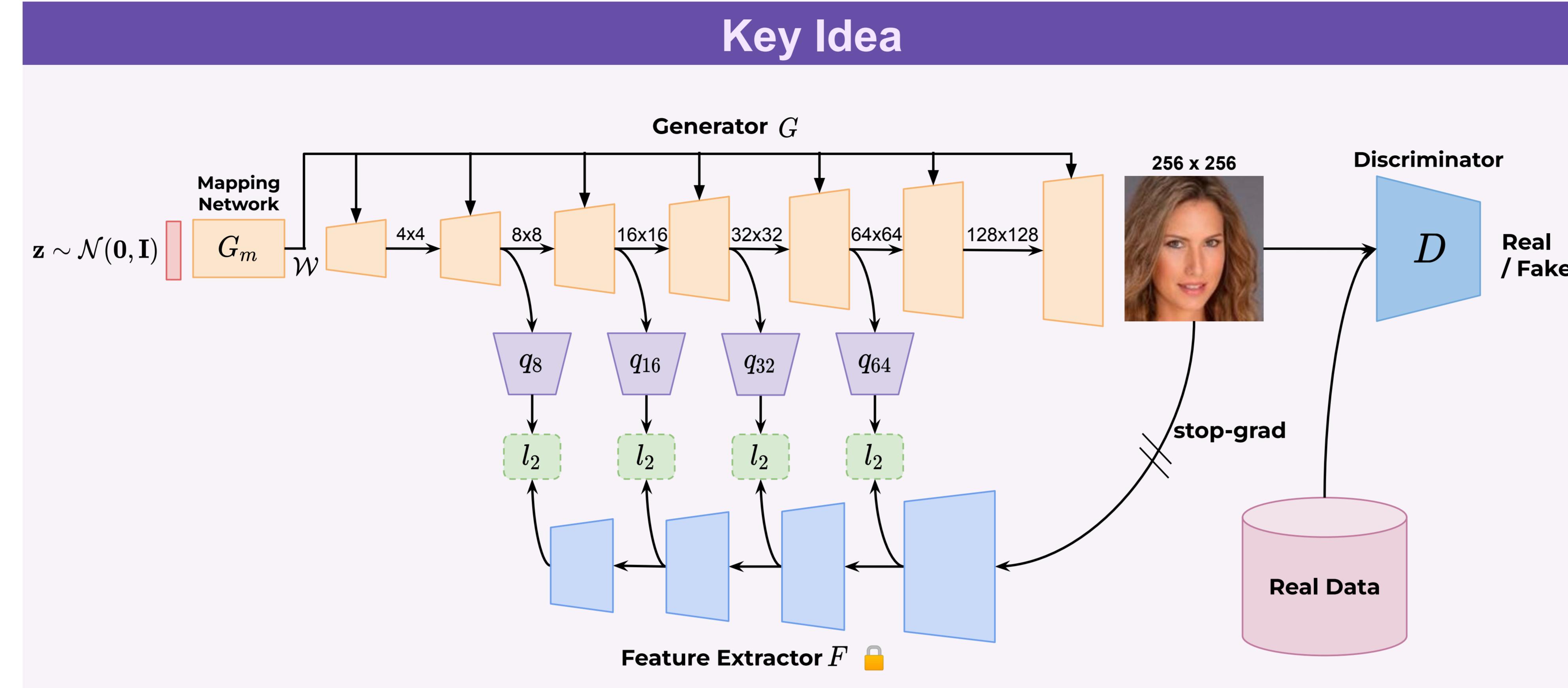
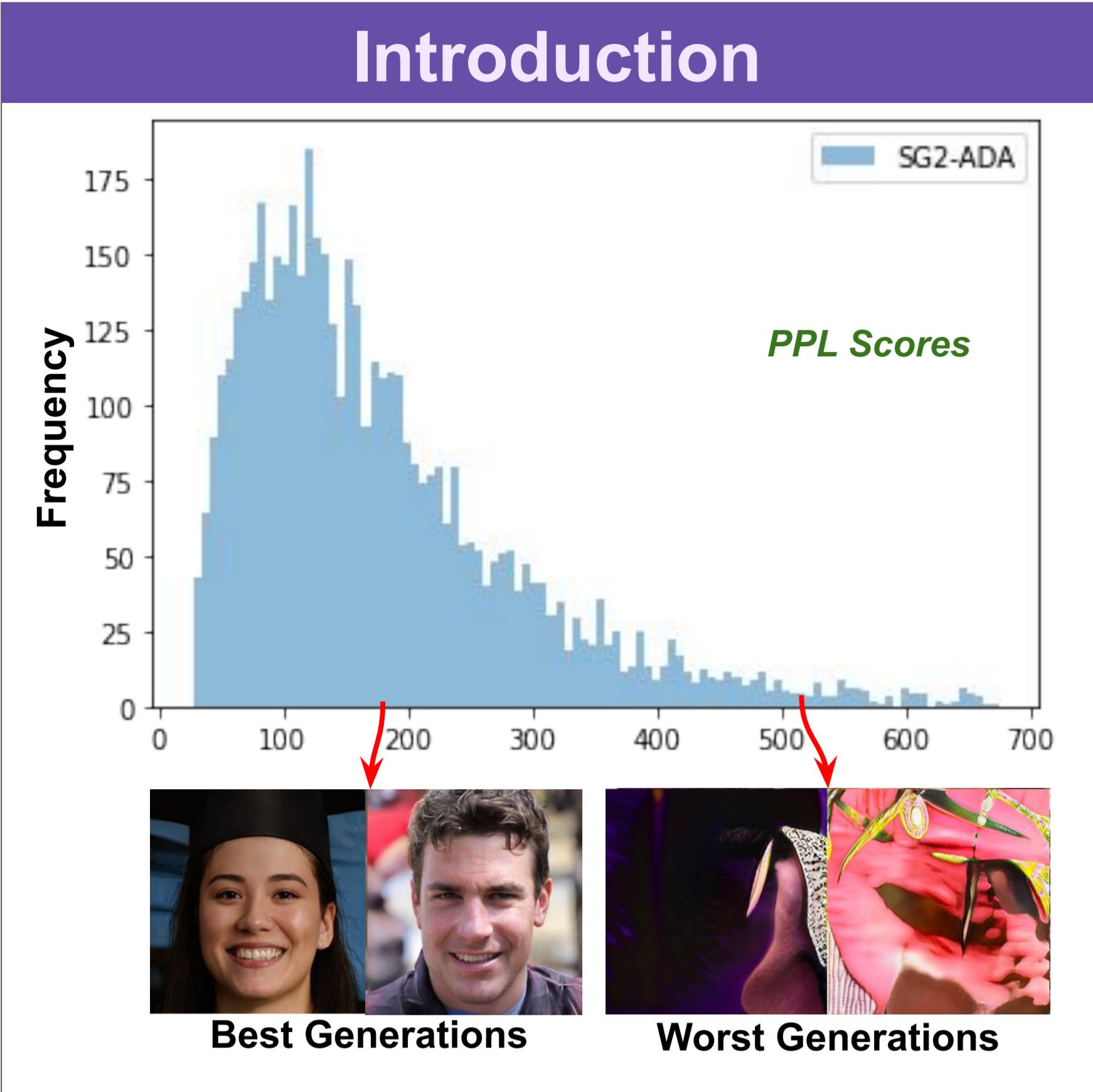
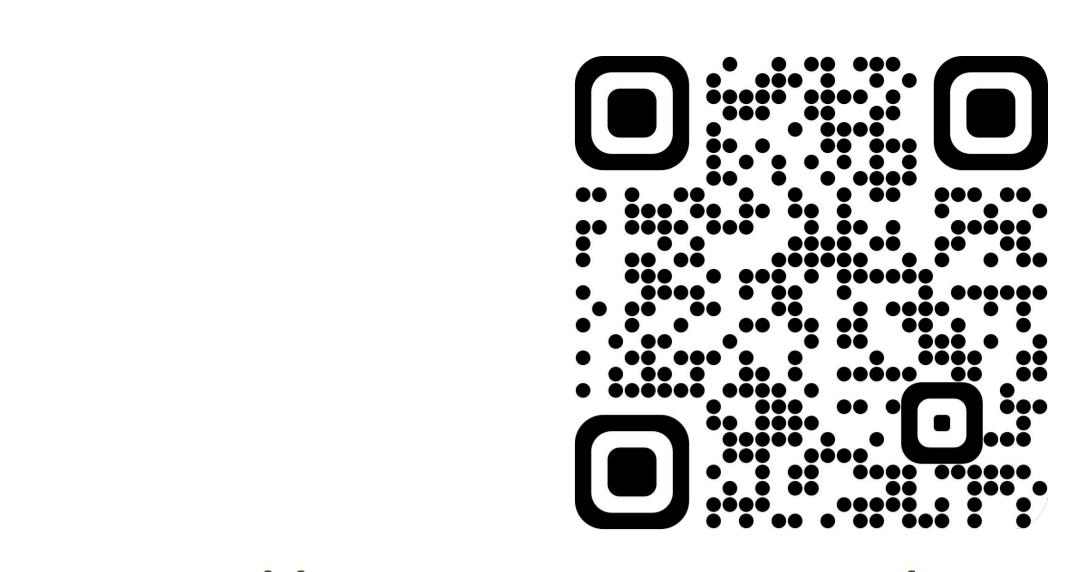


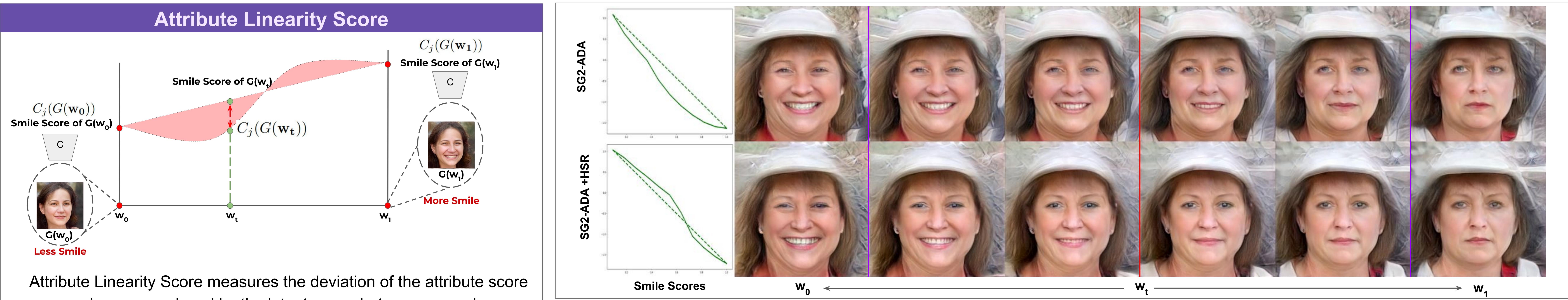
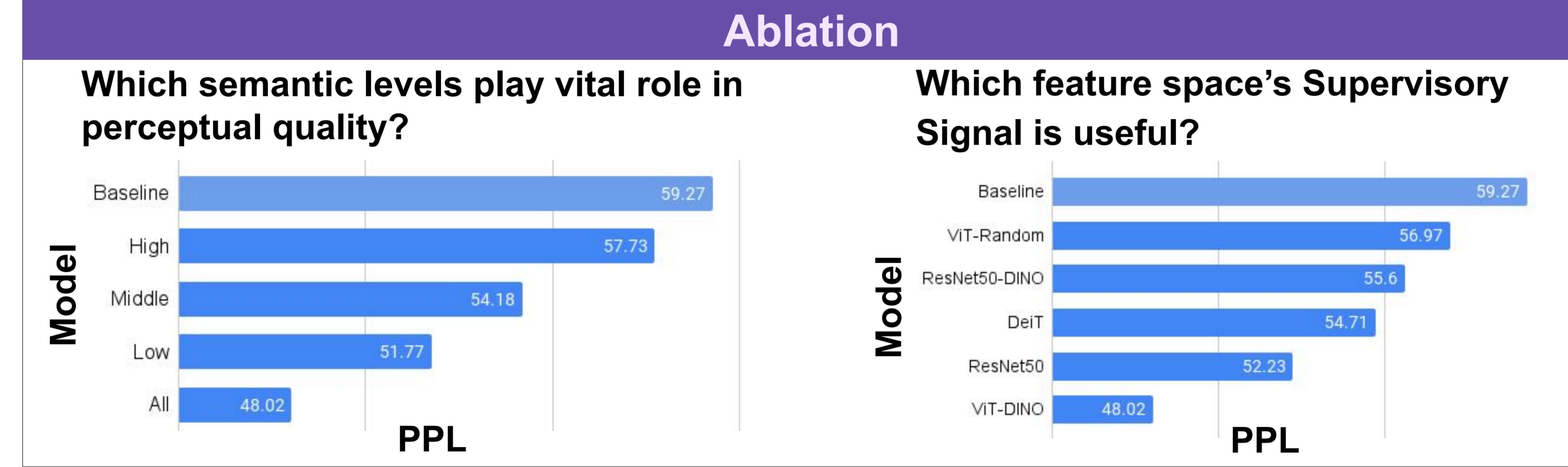


# Hierarchical Semantic Regularization of Latent Spaces in StyleGANs

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- ### Motivation
- We aim to alleviate the problem **unnatural image generation** by StyleGANs
  - A **naturalness prior** is introduced using **pretrained feature extractor**.
  - Analyzed the impact on **smoothness of latent space** and **editing capabilities** of StyleGANs



### Conclusion

- Self-Supervised networks exhibit strong natural priors, that can improve quality of generated images.
- We show the relationship between naturalness of images and smoothness of the latent space.
- We propose Attribute Linearity Score (ALS) to measure the linearity of the latent space wrt common facial attributes.