#Selfie: Generating and Improving Instagram Images using InstaGAN
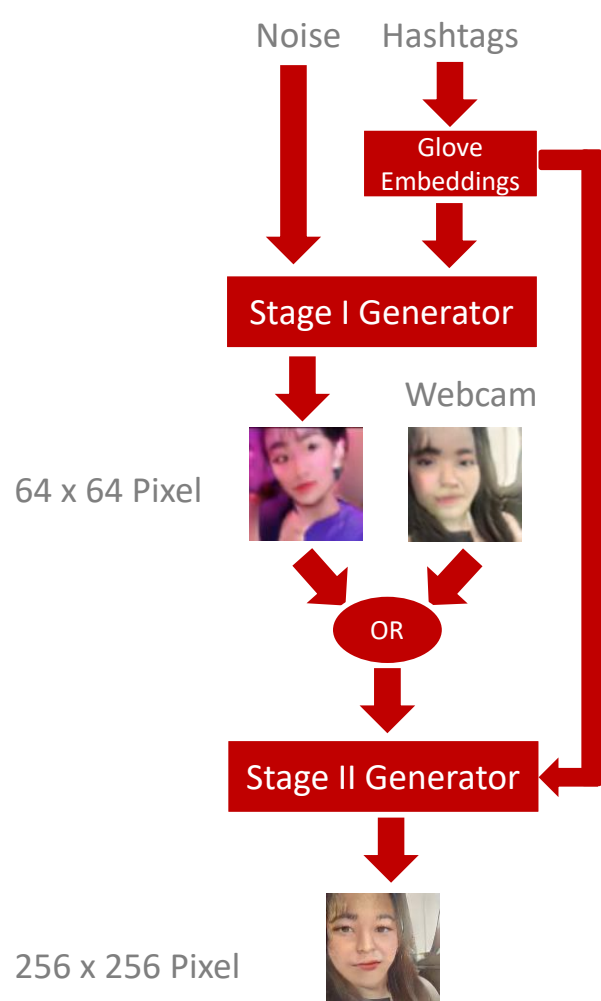
TECHNISCHE UNIVERSITÄT DARMSTADT

TUD
Graphisch-Interaktive Systeme

#PimpYourInstagramProfile

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Architecture

StackGAN [1]

Noise   Hashtags

Glove Embeddings

Stage I Generator

Webcam

64 x 64 Pixel

OR

Stage II Generator

256 x 256 Pixel

Process

1. Gather Data
2. Preprocess Data
3. Train Stage I
4. Train Stage II (using Generator of Stage I)

Crawling Instagram

- 90,000 distinct images
- 64,470 distinct Hashtags
- Popular Hashtags:
  - #ootd (Outfit of the day)
  - #셀카 (Selfie)
  - Summer, Friends …

Architecture Attributes

- Training two conditional GANs
- 100 dimensional Glove embeddings
- Stage I: 120 Epochs
- Stage II: 35 Epochs

Applications

- Style Transfer
- Change hairstyle
- Add Snapchat Filters
- Transform images
- … and many more!

Results

#Couple #Love   #Daily #Fashion   #셀카 #일상

Stage I

Stage II

Stage I

[1] Zhang, Han, et al. "Stackgan: Text to photo-realistic image synthesis with stacked generative adversarial networks." *Proceedings of the IEEE International Conference on Computer Vision*. 2017.

Deep Generative Models, Summer 2019