Style-Based Global Appearance Flow for Virtual Try-On

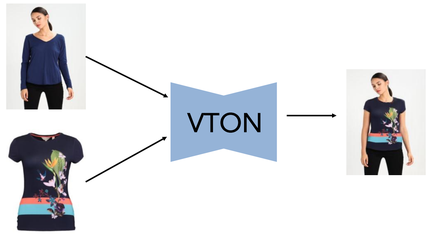
Sen He, Yi-Zhe Song, Tao Xiang

UNIVERSITY OF SURREY

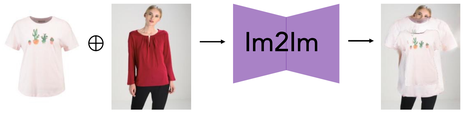
CVSSP Centre for Vision, Speech and Signal Processing

CVPR JUNE 19-24 2022 NEW ORLEANS LOUISIANA

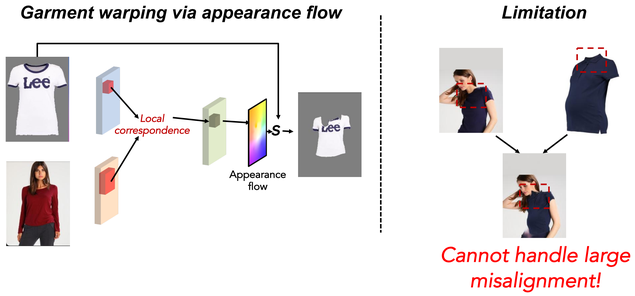
Image-based Virtual Try-on



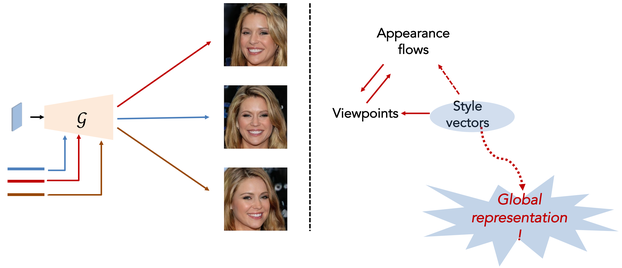
Main Challenge - Misalignment



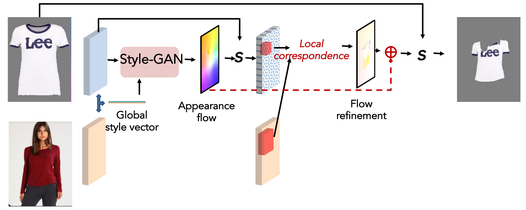
Existing SOTA Methods and Their Limitations



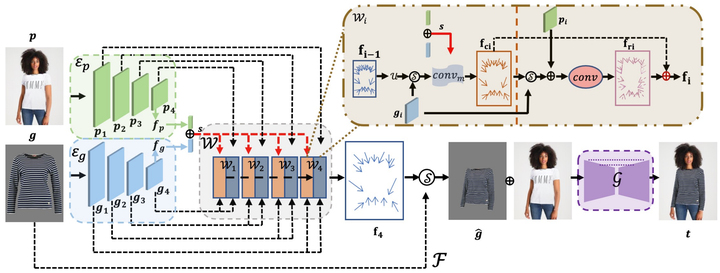
Our Motivation – Style-GAN based image geometric manipulation



Our Method - Style-based appearance flow estimation



Our Model



Qualitative Results

Quantitative Results

Methods	Warping	Parser	SSIM ↑	FID↓
VTON [14]	TPS	Y	0.74	55.71
CP-VTON [37]	TPS	Y	0.72	24.45
CP-VTON++ [25]	TPS	Y	0.75	21.04
Cloth-flow [13]	AF	Y	0.84	14.43
ACGPN [41]	TPS	Y	0.84	16.64
DCTON [9]	TPS	Y	0.83	14.82
PF-AFN [10]	AF	N	0.89	10.09
Zflow [5]	AF	Y	0.88	15.17
Cloth-flow* [13]	AF	N	0.89	10.73
Ours	AF	N	**0.91**	**8.89**

Table 1. Quantitative results of different models on VITON. Warping represents the warping methods used in different models. Parser indicates whether human parser is used in the model during inference. TPS: Thin Plate Spline. AF: Appearance Flow. *: re-trained with parser free training paradigm.