#### 虚拟换衣! 速览这几篇最新论文咋做的!

原创 bryant 机器学习与生成对抗网络 2019-11-28

Virtual Try-on 虚拟换衣,也就是给定某款衣服图像,让目标试衣者虚拟穿上。下面整 理了一些相关论文。打包下载好的论文,可关注微信公众号"**学点诗歌和AI知识**"回复"虚 拟换衣",来获得论文网盘下载地址哦。

- 2018-cvpr-VITON\_An\_Image-Based\_CVPR\_2018\_paper.pc
- 2018-iccv-Toward Characteristic-Preserving Image-base
- 2019-06-10-End-to-End Learning of Geometric Deformat
- 2019-09-05-MULTI-CONDITIONED GAN FOR FASHION.pc
- 2019-11-12-VITON-GAN Virtual Try-on Image Generator
- 2019-iccv-4-24-Compatible and Diverse Fashion Image In
- 2019-iccv-Image-Based Virtual Try-On Network With Bo
- 2019-iccv-Towards Multi-Pose Guided Virtual Try-On N
- 2019-iccvw-VITON\_A\_Network\_for\_Looking-Attractive\_V



### 1. 2018CVPR VITON: An Image-based Virtual Try-on Network

一作Han目前就职于虎牙直播,该文主要对上身换装。比如,为了让猪八戒换上旗袍,哈 哈,论文会首先提取二师兄的姿态骨骼点、身体形状二值图、头部三部分构成"不带衣服 信息的身体表征",加上旗袍图像,作为网络的输入,通过两阶段网络,由粗到细地生成"穿上旗袍的天蓬元帅"。

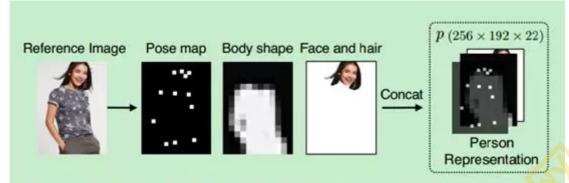
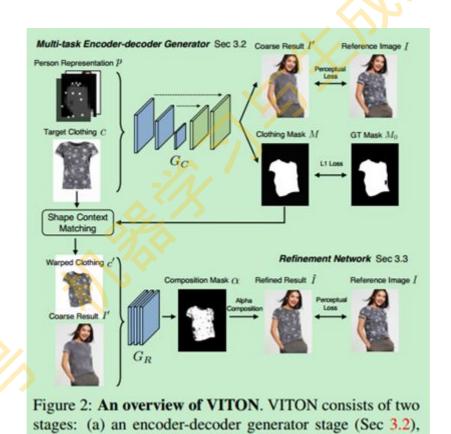


Figure 3: A clothing-agnostic person representation. Given a reference image I, we extract the pose, body shape and face and hair regions of the person, and use this information as part of input to our generator.

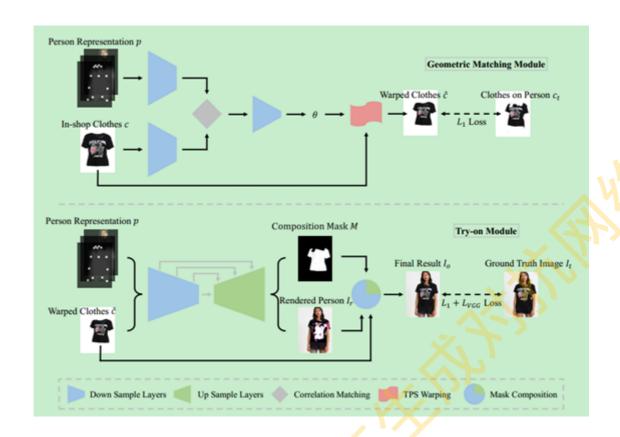


2. 2018 ECCV: Toward Characteristic-Preserving Image-based Virtual Try-On Network

and (b) a refinement stage (Sec 3.3).

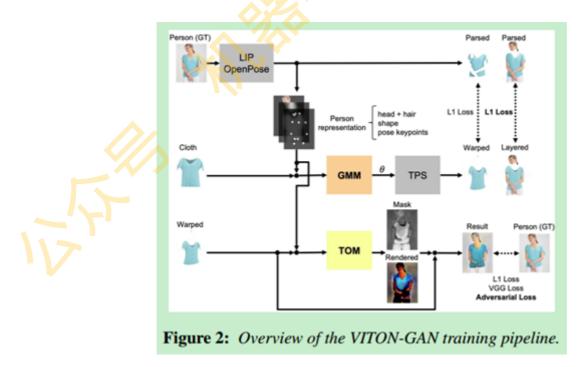
来自中山大学和商汤,对1中的VTION进行改进,提出方法主要由两个神经网络GMM与Try-On构成,可使试穿衣服更适合目标人物的体型,并保留服装的细节如纹理、刺绣

等。



## 3. VITON-GAN: Virtual Try-on Image Generator Trained with Adversarial Loss

来自东京大学,引入对抗损失,用GAN来做。



# 4. End-to-End Learning of Geometric Deformations of Feature Maps for Virtual Try-On

来自法国巴黎的工作,也引入了对抗损失。

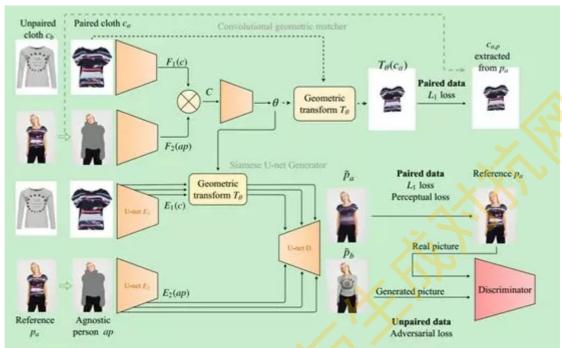


Figure 1: WUTON: our proposed end-to-end warping U-net architecture. Dotted arrows correspond to the forward pass only performed during training. Green arrows are the human parser. The geometric transforms share the same parameters but do not operate on the same spaces. The different training procedure for paired and unpaired pictures is explained in section [3.2].

## 5. POLY-GAN: MULTI-CONDITIONED GAN FOR FASHION SYNTHESIS

来自罗彻斯特理工学院,作者提出一个任务上似乎更通用些的工作。



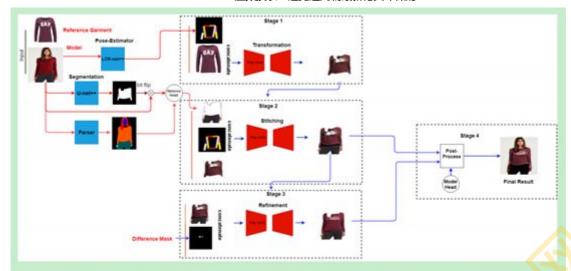


Figure 2: Poly-GAN pipeline. Stage 1: Garment transformation with Poly-GAN conditioned on the RGB skeleton of the model and the reference garment. Stage 2: Garment stitching with Poly-GAN conditioned on the segmented model, the RGB skeleton and the transformed garment. Stage 3: Refinement for hole filling with Poly-GAN conditioned on the stitched image and difference mask indicating missing regions. Stage 4: Postprocessing for combining the outputs of Stages 2 and 3 with the model head for the final result.

# 6. 2019 ICCV: Compatible and Diverse Fashion Image Inpainting

和本文提到的第一篇一样,一作Han,关注点是更搭配自然、更多样化。

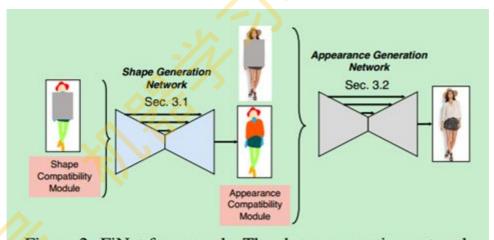




Figure 2: FiNet framework. The shape generation network (Sec. 3.1) aims to fill a missing segmentation map given shape compatibility information, and the appearance generation network (Sec. 3.2) uses the inpainted segmentation map and appearance compatibility information for generating the missing clothing regions. Both shape and appearance compatibility modules carry uncertainty, allowing our network to generate diverse and compatible fashion items.

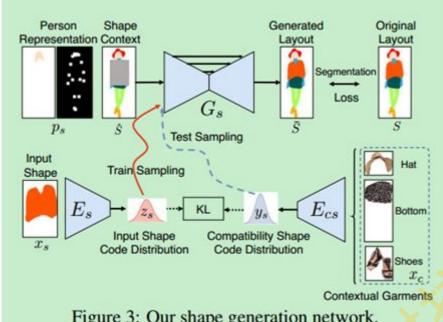
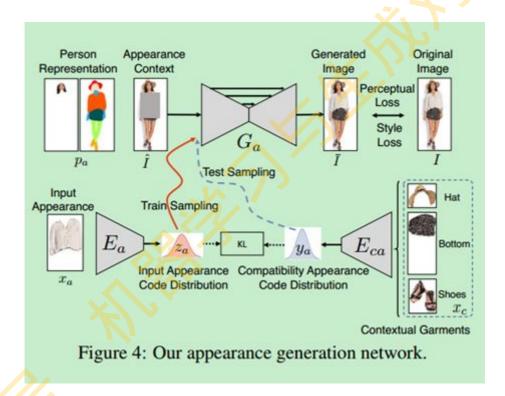


Figure 3: Our shape generation network.



### 7. 2019 ICCV: VTNFP: An Image-based Virtual Try-on Network with Body and Clothing Feature Preservation

来自东北大学和加利福尼亚大学的工作。

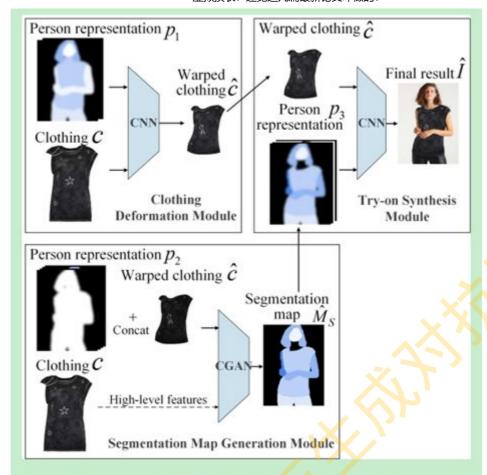
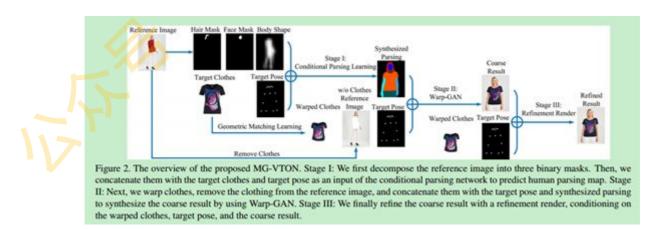


Figure 2. Overview of VTNFP, consisting of three modules - clothing Deformation Module, Segmentation Map Generation Module and Try-on Synthesis Module.

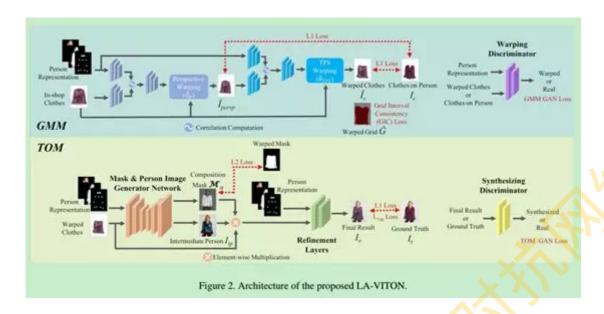
## 8. 2019 ICCV: Towards Multi-pose Guided Virtual Try-on Network

来自中山大学的工作。



# 9. 2019 ICCV: LA-VITON: A Network for Looking-Attractive Virtual Try-On

#### From NHN Corp.



### 更多分享欢迎关注微信公众号:



文章已于2019-11-29修改

