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## **Image-Based Virtual Try on Clothes**

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Abstract: The Virtual Try on Cloth is image-based technology to enhance the user experience on fashionoriented ecommerce websites, it will help customer's satisfaction. To get perfect body fit cloth or exact cloth fitting on body through Imaged based -virtual try on, it's quite difficult. Here we present a virtual try on system to get photo-realistic images of clothed person and target clothing. Our project idea is applying some steps below to get exact results. Firstly, based on the pose of the given person our model adjusts the target clothing form to compatible with the given pose. After this next task is to generate the body segmentation map of the person wearing the target clothing, to better understand the body parts and clothing regions. Finally, the body segmentation map is fused together with warped clothing and a given person image for fine-scale image synthesis. The body segmentation map prediction using CNN, helps to guide image synthesis where body part and clothing intersects and it's useful to preserving clothing and body part details.

Keywords: CNN, Body Segmentation Map, Virtual try on cloth, Machine Learning, Image-based technology.

## REFERENCES

- [1]. He Huang, Philip S. Yu and Changhu Wang, "An Introduction to Image Synthesis with Generative Adversarial Nets,"17 Nov 2018
- [2]. Han, X., Wu, Z., Wu, Z., Yu, R., Davis and L.S., "Viton: An image-based virtual try-on network. In", the IEEE Conference on Computer Vision and Pattern Recognition (CVPR). (2018)
- [3]. Wang, B., Zheng, H., Liang, X., Chen, Y., Lin, L., Yang and M., "Toward characteristic preserving imagebased virtual try-on network," In: The European Conference on Computer Vision (ECCV). (2018)
- [4]. M. Minar, T. Tuan, H. Ahn, P. Rosin, and Y. Lai, "CP-VTON+: Clothing shape and texture preserving image-based virtual tryon," in Proc. CVPRW, 2020
- [5]. Dong, H., Liang, X., Shen, X., Wang, B., Lai, H., Zhu, J., Hu, Z., Yin and J., "Towards multi-pose guided virtual try-on network," In: The IEEE International Conference on Computer Vision (ICCV). (2019)
- [6]. Yu Liu, Wei Chen, Li Liu and Michael S. Lew., "SwapGAN: A Multistage Generative Approach for Personto-Person Fashion Style Transfer," IEEE Transactions on Multimedia (Volume: 21, Issue: 9, September 2019)
- [7]. Raj, A., Sangkloy, P., Chang, H., Lu, J., Ceylan, D., Hays and J., "Swapnet: Garment transfer in single view images," In: The European Conference on Computer Vision (ECCV). (2018)
- [8]. Ruiyun Yu Xiaoqi Wang Xiaohui Xie., "VTNFP: An Image-based Virtual Try-on Network with Body and Clothing Feature Preservation," Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2019, pp. 10511-10520
- [9]. Yuan Chang, Tao Peng, Ruhan He, Xinrong Hu, Junping Liu, Zili Zhang, Minghua Jiang, "DP-VTON: TOWARD DETAIL-PRESERVING IMAGE-BASED VIRTUAL TRY-ON NETWORK," Published in: ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)
- [10]. Bin Ren , Hao Tang , Fanyang Meng , Runwei Ding , Ling Shao , Philip H.S. Torr5, Nicu Sebe, "Cloth Interactive Transformer for Virtual Try-On," arXiv:2104.05519v1 [cs.CV] 12 Apr 2021

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- [11]. Assaf Neuberger Eran Borenstein Bar Hilleli Eduard Oks Sharon, "Image Based Virtual Try-on Network from Unpaired Data," Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2020, pp. 5184-5193
- [12]. Stefan Hauswiesner; Matthias Straka; Gerhard Reitmayr, "Virtual Try-On through Image-Based Rendering," Published in: IEEE Transactions on Visualization and Computer Graphics (Volume: 19, Issue: 9, September 2013)