Creating a personalized avatar of a person for a virtual fitting of clothes

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Research

The problem of virtual clothes fitting is investigated.

Research objective —
suggest a method of creation personalized 3D avatar for a virtual fitting of clothes.

Required to suggest
1. method of generating 3D model parameters,
2. method of fitting and loose checking of the clothes on 3D avatars.

Related papers

1. *Realistic, Animatable Human Reconstructions for Virtual Fit-On*[1]: given the main pipeline of online garment fitting
2. *STAR: A Sparse Trained Articulated Human Body Regressor*[2]: state-of-the-art and light computational human model
3. *Keep it SMPL: Automatic Estimation of 3D Human Pose and Shape from a Single Image*[3]: generating a 3D human model from image
4. *Predicting Loose-Fitting Garment Deformations Using Bone-Driven Motion Networks*[4]: generates realistic motion of clothes and predicts the looseness of it.

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[1]https://arxiv.org/pdf/2210.08535.pdf
[2]https://star.is.tue.mpg.de/
[3]https://arxiv.org/pdf/1607.08128.pdf
[4]https://arxiv.org/pdf/2205.01355.pdf

Future work plan

1. creation of model that generates STAR model parameters,
2. investigation of clothes problem (dataset and fitting),
3. investigate the hair problem.