Description
This project is about the virtual try-on of clothes based on images. When shopping clothes online, trying them on your own body before buying helps a lot with making a smart buying decision. However, the images that fashion retailers (Zalando, H&M, ...) provide are not always suitable for a realistic try-on. Images can be photographed in different ways. When draped on mannequins, they obtain proper lighting and look realistic (a). When laid on the ground, however, clothes look flat and therefore the try-on result looks flat, too (b).

The goal of this project is to write an image processing module that adds shading to flat clothes images. This can be achieved with the following steps:

1. register a 3D body model to the image
2. render it with a desired light setting
3. apply the rendered shading to the 2D image

With step 1 being the challenge. There is already a 2D body model registered to the piece of clothing in the image, but it has no 3D data that can be used to compute shading. The major challenge will therefore be the accurate 2D-3D model registration and possibly an additional image registration step for pixel-precise alignment.

The result could look like the right image.

This project is supervised and supported by Reactive Reality (www.reactivereality.com), a spin-off of the ICG/TUG that is focused on mobile AR around the user’s body.

Read more:
› Image-based modeling & rendering
› Virtual try-on technology
› Pictofit

Supervisors: Philipp Grasmug
              Stefan Hauswiesner
              Dieter Schmalstieg

Project period: July - Sept. 2017
Compensation: approx. 900 EUR / month
Contact: hauswiesner@reactivereality.com