**Mobile Image Segmentation**

**Student Project**


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**Description**

Image segmentation is the task of separating foreground pixels from background pixels. Existing image segmentation methods either run automatically and do not always yield satisfying results, or require manual user input to guide the algorithm.

Such user input is often cumbersome: it requires special knowledge how the algorithm works to e.g. paint seed regions or trace outlines. Moreover, the input needs to be very accurate which is generally achieved using a pointing device (e.g. mouse, pen).

The goal of this project is to develop a segmentation algorithm and a user input method that are tightly connected and tailored to mobile devices (low input precision, low user skills, quick feedback). The algorithm to be explored in this project is the clustering of superpixels (see image above). In the user interface, superpixel regions should “break off” the foreground region when dragged/pulled. The result should be an interactive mobile app that makes image segmentation simple and enjoyable. Read more:

› Superpixel segmentation

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.

**Supervisors:** Philipp Grasmug  
Stefan Hauswiesner  
Dieter Schmalstieg

**Project period:** July - Sept. 2017

**Compensation:** approx. 900 EUR / month

**Contact:** hauswiesner@reactivereality.com