Body 3D Reconstruction for Aesthetic Medicine

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Abstract

We present a method to obtain a 3D reconstruction of the body, starting with the upper body but extendable to full body, in the context of aesthetic medicine, where anatomical accuracy is an important requirement. Our method uses a neural network to predict pixel-aligned implicit functions from three pictures taken with a commercial camera or cell phone. This allows us to capture geometries of arbitrary topology comprising everything from the chin to just above the knees, possibly including garments. The capture process takes seconds and yields sub-centimeter accuracy in the torso region without requiring specialized hardware.