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Learning a Siamese CNN for Assessing the Semantic Similarity of Images of Silk Fabrics

Institut für Photogrammetrie
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Proposal for a Master thesis topic (DE/EN)

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In the context of the SILKNOW project we want to develop an image retrieval software based on siamese CNN. The purpose of this software is to take an input image and output images from a database that are similar to the input. The goal of the thesis will be to develop a learning procedure for a siamese CNN in order to assess the semantic similarity of images, while radiometric similarity might be taken into account, too. For the evaluation, the Siamese CNN will be used in the context of a k-NN classifier, which predicts the semantic properties of an image of a silk fabric by finding similar images with known properties. We expect that this method can be utilized as a classifier for images of silk fabrics.

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