DEGREE PROJECTS

INVESTIGATE AND OPTIMIZE A TRACKING ALGORITHM FOR FINDING SYMMETRIC FEATURES

Today we have a proprietary tracking algorithm that can find symmetric features in an image sequence using pattern recognition techniques. This algorithm performs well, but due to overall improvements in available software and hardware we expect that it could be improved.

The algorithm is based on a doctoral thesis from 1988 but is poorly documented and it is not obvious exactly how the C++ code is derived from the published theory.

This thesis project could be formulated in several ways depending on the interest and competence of the student. One approach would be the theoretical approach, which would focus on relating the theory from the original thesis to the C++ algorithm and would result in a theoretical description of how it works. It could also involve potential improvements or generalization of the algorithm, and to identify an accuracy measure. Another approach would focus on optimizing the implementation, possibly by using GPU programming (in OpenCL or CUDA).

Other topics related to image analysis algorithms may also be interesting. Please contact us to discuss your ideas!

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