

## A Method for Interactive Shape Detection in Cattle Images Using Genetic Algorithms (2007)

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10.1007/978-3-540-74272-2\_86 Abstract: Segmentation methods based on deformable models have proved to be successful with difficult images, particularly those using genetic algorithms to minimize the energy function. Nevertheless, they are normally conceived as fully automatic, and not always generate satisfactory results. In this work, a method to include the information of fixed points within a contour detection system using point distribution models and genetic algorithms is presented. Also, an interactive scheme is proposed to take advantage of this technique. The method has been tested against a database of 93 cattle images, with a significant improvement in the success rate of the detections, from 61% up to 95%.