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Edge Detection using G-lets based on Matrix Factorization by Group Representations

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Highlights

Features of G-lets Edge Detector:

Geometry of the objects in the image are preserved No need to check every point in the image for an edge point Edges are continuous G-lets filters are used to preprocess the gradients in the image After G-lets filter processing the resultant G-lets edge image is thresholded to get a black and white image which contains most of the edges The remaining part of the edges are traced using gradient directions False edges are not produced Tracking the outline of an object is easy Outlining small objects in a cluttered image is shown to be possible Outlining edges in noisy images without losing continuity is shown to be possible Lesser computations at each edge point than Canny operator. Shows better performance than Canny edge detector.

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