

## 基于曲线波马尔可夫模型的人脸检测

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摘要:

本文提出了一种基于曲线波马尔可夫模型的混合人脸检测算法。曲线波变换是一种多尺度几何变换,具有很好的方向性,能用极少的非零系数精确表示图像的边缘,对物体的边缘具有最稀疏的表示。根据隐性马尔可夫对人脸拓扑结构的约束,采用3状态的隐马尔可夫模型进行从粗到细的人脸检测。实验结果表明,这种算法具有较好的检测速度与正确率及鲁棒性。

关键词: 曲线波; 隐性马尔可夫模型; 人脸检测

## Face Detection Based on Curvelet Hidden Markov Model

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**Abstract:**

method of face detection based on Curvelet Hidden Markov Model is presented for this paper. Curvelet is a kind of multi-scale transform, it has good property of directivity and describes image edge through very few coefficients, it also most sparse for expression of objection edge. According to restriction to face topology by hidden markov model, the 3-States Curvelet Hidden Markov Model is used to detect face from coarse to fine. Experimental results show this method has well fast speed, considerably correctness and robustness in face detection.

**Keywords:** curvelet ; hidden markov model ; face detection

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