

Title	身体部位ごとの特徴が歩容認証精度に与える影響の分析 と視点依存性の検討
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身体部位ごとの特徴が歩容認証精度に与える影響の分析と視点依存性の検討

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Gait recognition is sensitive to viewpoint variations, and the contribution of different body parts under changing viewpoints remains insufficiently explored. This study addresses the problem of how body-part segmentation influences gait recognition accuracy and viewpoint robustness. Using gait silhouette sequences from the CASIA-B dataset, we adopt part-based segmentation strategies to divide the human body into three parts (head, upper body, and lower body) and five finer-grained regions. Each segmented part is independently trained and evaluated across multiple viewing angles to analyze learning behavior and recognition performance. Experimental results show that the lower body provides the most discriminative gait features across viewpoints, while the upper body contributes complementary information in a viewpoint-dependent manner. The head region exhibits limited contribution. Furthermore, the five-part segmentation improves recognition stability and peak accuracy compared with the three-part configuration. These findings demonstrate the effectiveness of part-based segmentation and highlight the importance of viewpoint-aware analysis in gait recognition.