An intelligent vision system provides the ability for a robot to interact the physical world. However, object recognition systems nowadays are suffered from low recognition rate and high computing load. This study aims to develop a low-level image processing mechanism for an interactive robotic vision system. The proposed system provides a human-mimic way to segment and keep tracking objects. Although it is impossible to segment objects perfectly without any prior knowledge of the objects, the system should provide reliable simplification, which helps to enhance both the speed and correctness of object recognition.

Current experimental results show that the system can robustly find the track interesting segments against pose translation, camera motion, motion blur, and temporal occlusion.

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