

A Cooperative Recognition of Human Movements and Related Objects Guided by Functional Model of Objects

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Abstract: We propose a new type of object models that includes functional attributes like edible, portable and supportable, instead of or in addition to the conventional appearance based ones like color, shape and so forth. It leads to not conventional recognition of objects in the manner of one by one separately but understanding a scene where humans are interacting with objects. The detection of the functional attributes defined newly in a proposed model requires recognition of humans' actions that actually interact with mainly an object. This has ever been ignored in the traditional object recognition, since a dominant situation for object recognition is set up as a static circumstance without human activities.