

Leeds Mobile Robot Kitchen Dataset Update

The Dataset (containing 5 days of recordings) has been re-formatted for use in the below two publications. It has been segmented into short clips, and natural language commands are given for each clip. The human pose estimates have also been improved using a Convolutional Neural Network on the RGB images.

The associated AAAI 2017 paper titled "Unsupervised Activity Recognition using Latent Semantic Analysis on a Mobile Robot" is available [here](#), and IJCAI 2017 paper titled "Grounding of Human Environments and Activities for Autonomous Robots" is available [here](#). Please cite if you use the updated dataset with natural language commands.

A list of new items added to the DOI are:

segmented_dataset.zip : contains 493 pre-segmented video clips each containing a single activity instance. Each clip contains an image/, robot/, skeleton/ subdirectory containing the relevant detection information. Plus a label.txt file specifying the activity class label (and the original recorded ID the clip is segmented from).

natural_language_annotations.tar.gz : contains 493 video natural language annotations, where amazon turkers were asked two tasks: 1) annotate a short sentence describing the activity occurring in the video clip. 2) annotate a short sentence describing the person and their attire performing the activity.

point_cloud_object_clusters.zip: a collection of 44 locations of autonomously segmented kitchen objects perceived from a mobile robot's RGBD camera. The process is described in [this](#) IJCAI 2017 paper.

Please note, the skeleton poses have been re-estimated from the RGB images using "[Convolutional Pose Machines](#)", Shih-En Wei, Varun Ramakrishna, Takeo Kanade, Yaser Sheikh, CVPR 2016.

Python code is available for this [here](#), which is compatible with ROS Indigo.