CVToolbox in Matlab

Master in Computer Vision

Visual Perception

Alberto QUINTERO DELGADO
ajquinterod@gmail.com

Technical Report

While making this toolbox one of the main problems found was making the video playing module a non-blocking module, so it left the possibility to the user to select the desired filters and to change its parameters while the video was playing (real time).

It was solved creating an intermediate function to call it after the video begin to plays and after a filter is selected this is done for obtaining the updated ***handles*** variable in Matlab.

The same problem was faced while getting the live stream from a webcam, and it was solved the in the same way as in the video. But for the webcam this was not the only problem faced; this toolbox was developed in a Linux based Operative System (actually in two; first in Fedora Linux and then in Ubuntu Linux). The problem faced here was that the integrated webcam of the laptop used was not supported for the matlab image acquisition toolbox (imaq toolbox) even though the matlab imaq toolbox use wrappers to the video4linux module.

At the end it was possible to get snapshots from the webcam of another laptop (also running Linux), but in that other laptop still there were problems with the imaq toolbox and the integrated camera so, even though I know the best way to get this module done is using the ***start(videoObj)***, ***stop(videoObj)*** functions and in between getting the image from the obtained frames in the buffer using the non-blocking function ***peekdata(videoObj)*** it was not possible to get it done with this instead is was necessary to use the function ***getsnapshot(videoObj)*** which just get one frame at a time.