

CAP5415 Computer Vision Fall 2012

Programming Assignment # 3

(Due 11/08/12)

Harris Corners and KLT Tracker

Deliverables: Source code, Project report including images/outputs of intermediate steps and final outputs/images/videos, discussion about problems encountered, where the algorithm fails.

Data: Sample sequences and outputs are provided on the course webpage.

http://vision.eecs.ucf.edu/courses/cap5415/fall2012/PA3_data.zip

Steps:

1) Implementing Harris corners:

Program should detect and display the Harris corners. Apply different settings (the sensitivity parameter k in Lecture 4 Slides 22 and 28) of the detector and thresholds on the overall response to find the reasonable outputs.

Hint: Apply non-max suppression after corner detection.

2) Implementing KLT tracker:

Track each detected corner on the object using the implemented KLT tracker till the end of the sequence. Display the tracked corners and the saved trajectories over time. (See Lecture 10 slide 38). Please check the reference paper for better understanding of the material.

<http://www.andrew.cmu.edu/course/42-731/handouts/Baker%26Matthews.pdf>

Please e-mail your deliverables to berkansolmaz@yahoo.com by 23:59 on 11/08/2012.