Focus plane identification

What’s in the field right now? (What have been developed?)

Han-Yu:

Ring difference focus: (I think this is definitely what we are looking for)

<https://www.youtube.com/watch?v=p5NrjcFY3vM>

Depth-from-focus(DFF)

<http://www.sciencedirect.com/science/article/pii/0167865587900262>

<https://search.proquest.com/docview/1113752856?pq-origsite=gscholar>

Moving foreground detection using Kalman filter (video):

<https://pdfs.semanticscholar.org/f680/e7e609ce0729c8a594336e0cf8f447b3ef13.pdf>

Background modeling using mixture of Gaussian (video):

<https://hal.archives-ouvertes.fr/file/index/docid/338206/filename/RPCS_2008.pdf>

I think Kara is right, this field is pretty saturated.

Unless anyone has any thoughts on what we can innovate on?

FingerSight (blind assistance elevator button identification system)

Advancement:

Works for all fonts/sizes/materials and different design of elevator control panel

Han-Yu:  
 I will talk to my professor and bring the hardware (camera) back.

We’ll have to collect data with the camera after I’ve got it here.

Does anyone has more thoughts on this?

Yen-Hsiang:

A robot arm for pushing elevator buttons (basic parameters to produce gray scale and binary image)

<http://ieeexplore.ieee.org/document/5603032/>

Matlab Computer Vision Toolbox (can detect and recognize text in natural images)

Just type “openExample('vision/TextDetectionExample')” in Matlab command window

<https://www.mathworks.com/help/vision/examples/automatically-detect-and-recognize-text-in-natural-images.html?s_tid=gn_loc_drop>