

```
# Noise filter threshold
```

```
# thresh = 1100
```

```
thresh = 1100
```

```
while(1):
```

```
    # read frames from both sources
```

```
    ret1, frame1 = cap1.read()
```

```
    ret2, frame2 = cap2.read()
```

```
    ret3, frame3 = cap3.read()
```

```
    dim = (480, 720)
```

```
    frame1 = cv2.resize(frame1, dim, interpolation=cv2.INTER_AREA)
```

```
    frame2 = cv2.resize(frame2, dim, interpolation=cv2.INTER_AREA)
```

```
    frame3 = cv2.resize(frame3, dim, interpolation=cv2.INTER_AREA)
```

```
    # Apply background subtraction
```

```
    fgmask_f1 = foog.apply(frame1)
```

```
    fgmask_f2 = foog.apply(frame2)
```

```
    fgmask_f3 = foog.apply(frame3)
```

```
    # Get rid of the shadows
```

```
    ret, fgmask_f1 = cv2.threshold(fgmask_f1, 250, 255, cv2.THRESH_BINARY)
```

```
    ret, fgmask_f2 = cv2.threshold(fgmask_f2, 250, 255, cv2.THRESH_BINARY)
```

```
    ret, fgmask_f3 = cv2.threshold(fgmask_f3, 250, 255, cv2.THRESH_BINARY)
```

```
    # Apply some morphological operations to make sure you have a good mask
```

```
    # fgmask = cv2.erode(fgmask, kernel, iterations = 1)
```

```
    fgmask_f1 = cv2.dilate(fgmask_f1, kernel, iterations=4)
```

```
    fgmask_f2 = cv2.dilate(fgmask_f2, kernel, iterations=4)
```

```
    fgmask_f3 = cv2.dilate(fgmask_f3, kernel, iterations=4)
```

```
    # Detect contours in the frame
```

```
    contours_f1, hierarchy_f1 = cv2.findContours(  
        fgmask_f1, cv2.RETR_EXTERNAL, cv2.CHAIN_APPROX_SIMPLE)
```

```
    contours_f2, hierarchy_f2 = cv2.findContours(  
        fgmask_f2, cv2.RETR_EXTERNAL, cv2.CHAIN_APPROX_SIMPLE)
```

```
    contours_f3, hierarchy_f3 = cv2.findContours(  
        fgmask_f3, cv2.RETR_EXTERNAL, cv2.CHAIN_APPROX_SIMPLE)
```

```
    if contours_f1:
```

```
        # Get the maximum contour
```

```
        cnt = max(contours_f1, key=cv2.contourArea)
```