



VISIÓN ARTIFICIAL

Práctica 11. Background Reduction

Ingeniería en Mecatrónica
6to semestre

Mtro. Mauricio Alejandro Cabrera Arellano
Alana Michelle Cantón Moreno - 22310155

Parte 1 del código:

MOG Background Reduction

```
import numpy as np
import cv2
#cap = cv2.VideoCapture('people-walking.mp4')
cap = cv2.VideoCapture(0)
fgbg = cv2.createBackgroundSubtractorMOG2()
while(1):
    ret, frame = cap.read()
    fgmask = fgbg.apply(frame)
    cv2.imshow('fgmask',frame)
    cv2.imshow('frame',fgmask)

    k = cv2.waitKey(30) & 0xff
    if k == 27:
        break

cap.release()
cv2.destroyAllWindows()
```

Parte 2 del código:

```
import numpy as np
import cv2
import matplotlib.pyplot as plt
img1 = cv2.imread('opencv-feature-matching-template.jpg',0)
img2 = cv2.imread('opencv-feature-matching-image.jpg',0)
orb = cv2.ORB_create()
kp1, des1 = orb.detectAndCompute(img1,None)
kp2, des2 = orb.detectAndCompute(img2,None)
bf = cv2.BFMatcher(cv2.NORM_HAMMING, crossCheck=True)
matches = bf.match(des1,des2)
```

```
matches = sorted(matches, key = lambda x:x.distance)
```

```
img3 = cv2.drawMatches(img1,kp1,img2,kp2,matches[:10],None, flags=2)
```

```
plt.imshow(img3)
```

```
plt.show()
```

