Computer Vision
Real-time Processing

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Reading from File

```python
import cv2
import numpy as np

cap = cv2.VideoCapture("red_panda_snow.mp4")

while True:
    ret, frame = cap.read()

    cv2.imshow("frame", frame)

    key = cv2.waitKey(25)
    if key == 27:
        break

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

Reading from Camera

```python
import cv2
import numpy as np
cap = cv2.VideoCapture(2)

cap.set(cv2.CAP_PROP_FRAME_WIDTH, 1280);
cap.set(cv2.CAP_PROP_FRAME_HEIGHT, 800);

while True:
    ret, frame = cap.read()
    cv2.imshow("frame", frame)
    key = cv2.waitKey(1)
    if key == 27:
        break
cap.release()
cv2.destroyAllWindows()
```

```
bit_and = cv2.bitwise_and(img2, img1)
bit_or = cv2.bitwise_or(img2, img1)
bit_xor = cv2.bitwise_xor(img1, img2)
bit_not = cv2.bitwise_not(img1)
bit_not2 = cv2.bitwise_not(img2)
```

Motion Detection

Write the code yourself.