

实验六 运动目标检测实验

实验目的

1. 掌握背景差值法对运动目标的检测原理及其程序设计
2. 实现背景更新
3. 了解图像图像差分法和基于光流的分割方法。

实验内容

1. 实现背景差值法对运动目标的检测;
2. 实现背景的更新。

源代码

```
1 clear all;
2 clc;
3 fileName = '6.mp4';
4 obj = VideoReader(fileName);
5 #读取视频
6 vidFrames = read(obj);
7 numFrames = obj.NumberOfFrames;
8 backFrame = imread('back.jpg');
9 [m, n] = size(backFrame);
10 figure;
11 #滤波器,腐蚀器
12 gausFilter = fspecial('gaussian', [5 5], 1);
13 se1 = strel('square', 4);
14
15 for k = 1:numFrames
16     #与背景做差,滤波腐蚀
17     currentFrame = vidFrames(:, :, :, k);
18     newFrame = uint8(abs(double(currentFrame) - double(backFrame)));
19     newFrame = rgb2gray(newFrame);
20     newFrame = imfilter(newFrame, gausFilter, 'replicate');
21     thr = graythresh(newFrame);
22     newFrame = im2bw(newFrame, thr);
23     newFrame = imerode(newFrame, se1);
24     subplot(122)
25     imshow(newFrame);
26
27     subplot(121)
28     imshow(currentFrame);
29     hold on
30
31     pause(0.001);
32     hold off
33 end
34
```

实验现象

