



基於影像處理之自走車自動追蹤

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硬體介紹



KTduino Uno R3A1



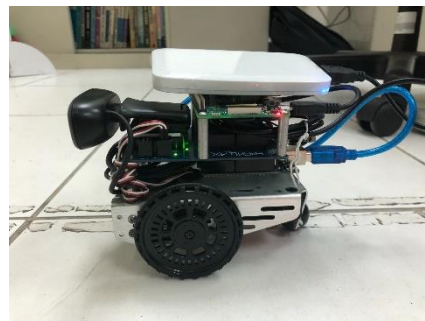
Arduino Uno Rev3



Raspberry Pi

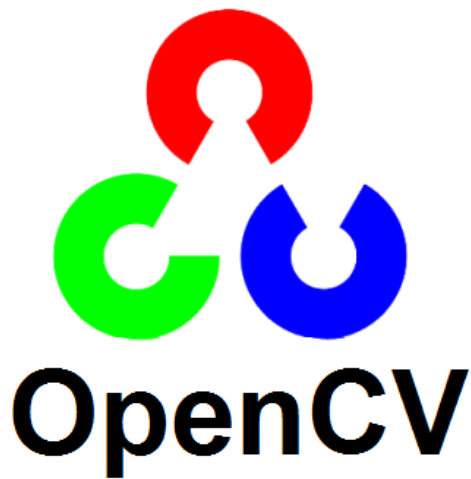


攝影機



自走車

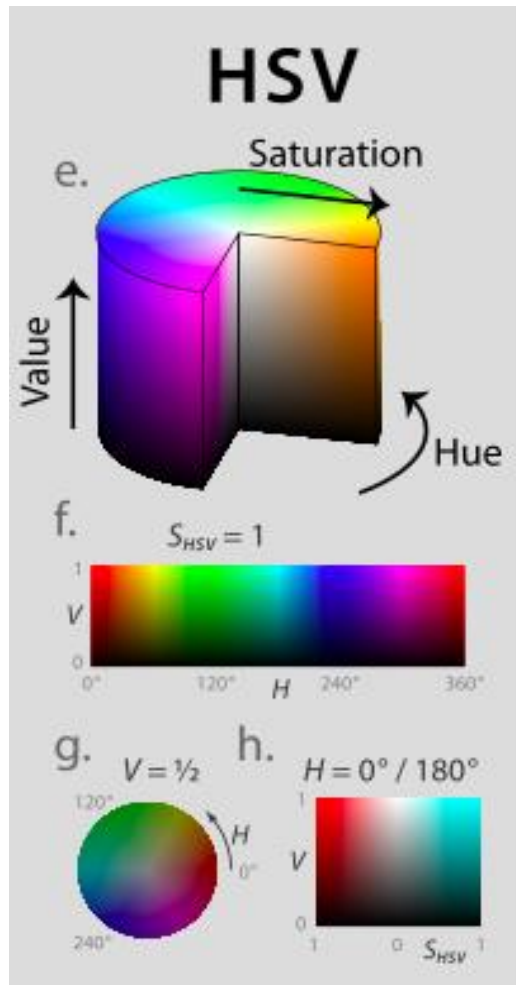
軟體介紹



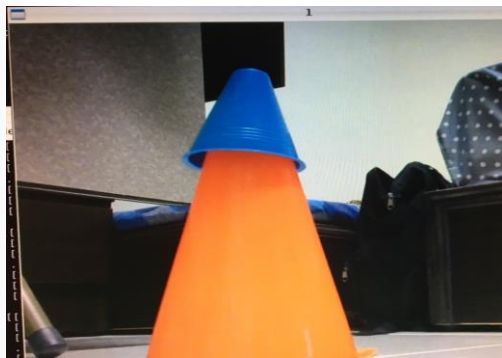
HSV色彩架構

- H = Hue色相(顏色)
- S = Saturation飽和度(越低越灰)
- V = Value明度(黑到白)
- H: 0~360
- S: 0~1
- V: 0~1

- OpenCV裡的HSV值為
- H/2 : 0~180
- S*255 : 0~255
- V*255 : 0~255



建置色彩遮罩



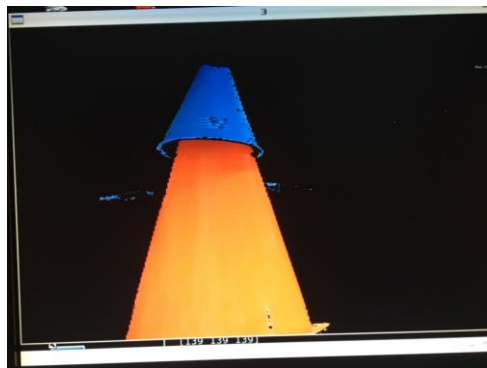
處理原圖



設置色彩遮罩



目標確立



結合影像

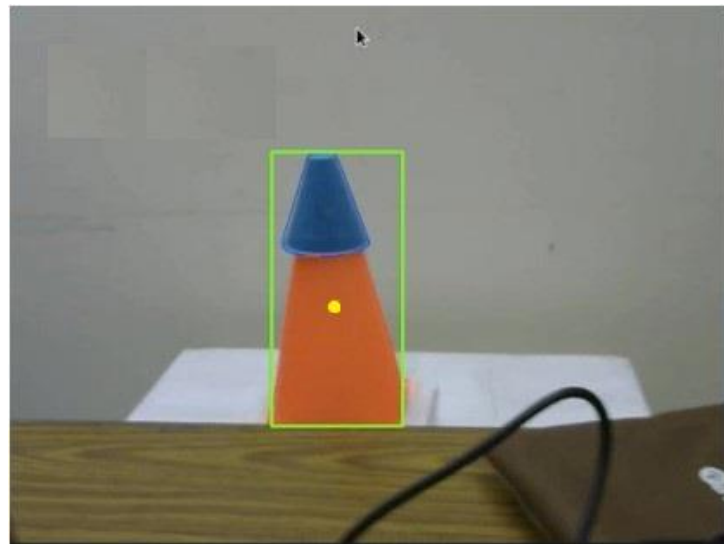
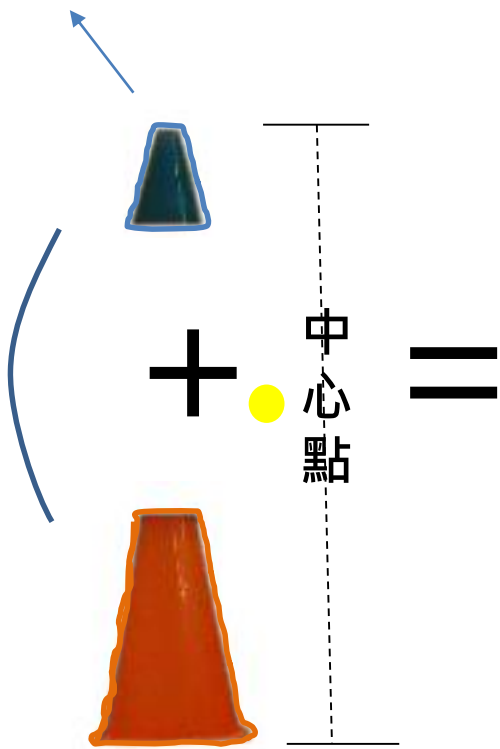


顯示原色

辨識過程

目標顏色

相對距離

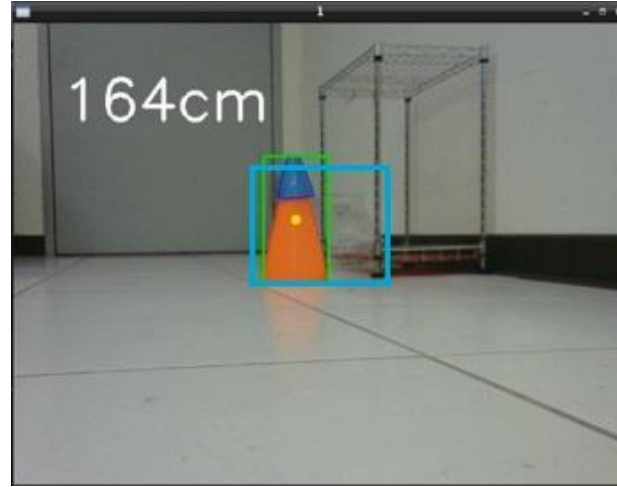


標記目標物

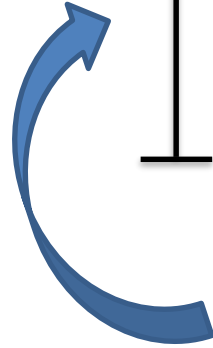
自動追蹤



目標距離



左轉



右轉





開始 DEMO