

# 多移動人員之軌跡分析與注視焦點判定

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## 摘要

現代人們可以透過電子看板上的廣告，來獲取生活中所需要的資訊，所以電子看板的重要性在日常生活中也變為是不可或缺的一環。而電子看板如果依所偵測到有在注視廣告的行人數量來進行收費，對於廣告商來說也會比較公平，也可依行人對廣告注視程度的不同而播放不同的廣告。

因此，要如何來判定行人是否有在注視廣告，就為本研究的重點，首先，我們必須考慮先從行人臉部的角度來判定，會有臉部大小以及人擋人等等遮蔽的問題發生，也要配合行人移動的軌跡來進行分析，所以，我們在做臉部區域偵測時，必須先做好前景物體偵測，利用背景相減法，先將前景物體擷取出來，接著再做膚色區域的偵測，能減少之後做臉部偵測時的搜尋範圍，也能夠過濾掉複雜的背景資訊，另外也可以根據所偵測出來的前景影像大小，迅速地偵測出人臉的位置，這樣不僅可以減少偵測時所需的時間，同時也可以減少偵測時可能發生的誤差，接著再利用所偵測出來的臉部區域來進行追蹤，分析其移動的軌跡並將其分類，再依其不同的特性來判斷出行人對廣告的注視程度。

關鍵詞：人臉偵測、前景物體偵測、背景相減法、注視焦點判定

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