Dr Michael Scott

# 1 This algorithm makes edges appear white.

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**Algorithm 1** Edge Detection

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**Require:**
    the height of the image, $0 \leq h$
    the width of the image, $0 \leq w$
    the source image, image

1:  **procedure** EDGEDETECT(image)
2:     **for all** $y$ in h **do**
3:         **for all** $x$ in w **do**
4:             $p_h \leftarrow$ pixel(x, y)
5:             $t_h \leftarrow \sum_{i=0}^{3} p_{hi}$
6:             $p_r \leftarrow$ pixel(x+1, y)
7:             $t_r \leftarrow \sum_{i=0}^{3} d_{ri}$
8:             $p_d \leftarrow$ pixel(x, y+1)
9:             $t_d \leftarrow \sum_{i=0}^{3} d_{di}$
10:
11:            **if** abs( $t_h$ - $t_d$) > 20 and abs($t_h$ - $t_r$) > 20 **then**
12:               setPixel(x, y, 255, 255, 255)
13:            **else**
14:               setPixel(x, y, 0, 0, 0)
15:            **end if**
16:         **end for**
17:     **end for**
18: **end procedure**

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