BACKGROUND SUBTRACTION

Version 0.1
Computing
COMP120

Dr Michael Scott

1 This algorithm replaces one background with another.

Algorithm 1 Background Subtraction

Require:
the height of the source image, $0 \leq h$
the width of the source image, $0 \leq w$
the source image, image
the original background image, background
the new background image, newBackground

```
1:  procedure BACKGROUND(image, background, newBackground)
2:      for all y in h do
3:          for all x in w do
4:              p ← pixel(image, x, y)
5:              p_b ← pixel(background, x, y)
6:              if distance(p, p_b) < t then
7:                  pixel(image, x, y) ← pixel(newBackground, x, y)
8:              end if
9:          end for
10:     end for
11: end procedure
```