Feature Extraction and Image Processing in Computer Vision – Third Edition

Known Errors

Apologies. Here's a list of errors found (and for which beer was awarded) with changes underlined.

Pg 1 "vision, on how a computer" -> "vision, or how a computer"

Pg 67 "by subtraction of the two (Figure 2.22(d))" -> by subtraction of the two (Figure 2.22(h))

Pg 86 "for addition in code 1.3" -> "for addition in code 1.5"

Pg 100 template convolution code rewritten as

```
%then convolve the template
for x = tc+1:cols-tc %address all columns except border
    for y = tr+1:rows-tr %address all rows except border
        sum=0; %initialise the sum
        for iwin=1:tcols %address all points in the template
            for jwin=1:trows
                sum=sum+image(y+jwin-tr-1,x+iwin-tc-1)*... % sum, Eq. 3.18
                          template(trows-jwin+1,tcols-iwin+1);
            end
        end
        convolved(y,x)=sum; %store as new point
    end
end
```

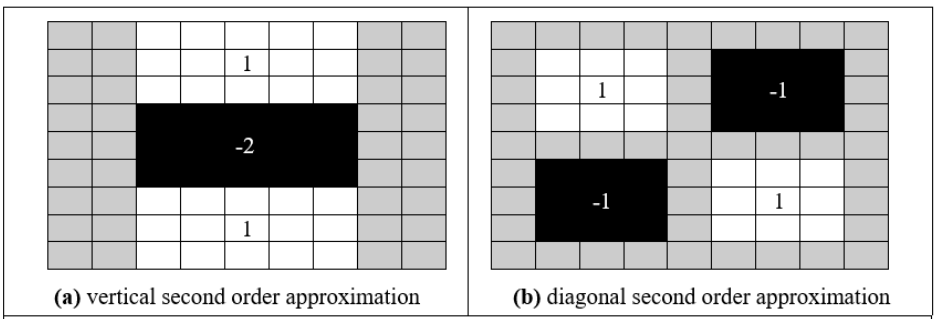
and normalisation removed.

Pg 117 "$\nabla_E(\mathbf{P}_{x,y}) = \mathbf{P}_{x-1,y} - \mathbf{P}_{x,y}$" -> "$\nabla_E(\mathbf{P}_{x,y}) = \mathbf{P}_{x+1,y} - \mathbf{P}_{x,y}$" and

"$\nabla_W(\mathbf{P}_{x,y}) = \mathbf{P}_{x+1,y} - \mathbf{P}_{x,y}$" -> "$\nabla_W(\mathbf{P}_{x,y}) = \mathbf{P}_{x-1,y} - \mathbf{P}_{x,y}$"

Pg 165 "$\sigma\nabla^2 g(x,y,\sigma) = \frac{\partial g}{\partial \sigma} = \frac{g(x,y,k\sigma)-g(x,y,\sigma)}{k\sigma-\sigma}$" -> "$\sigma\nabla^2 g(x,y,\sigma) = \frac{\partial g}{\partial \sigma} = \lim_{k\to 1} \frac{g(x,y,k\sigma)-g(x,y,\sigma)}{k\sigma-\sigma}$"

Pg 197



(a) vertical second order approximation **(b)** diagonal second order approximation

Figure 4.43 Basis of SURF Feature Detection

Pg 267

$$\varphi'(\theta) = \frac{y'(\theta)}{x'(\theta)} = \frac{-a_y \sin(\theta) + b_y \cos(\theta)}{-a_x \sin(\theta) + b_x \cos(\theta)}$$

Pg 379 Eq 7.68 $P(S)=\int_t \sqrt{\left(x'(t)\right)^2+\left(y'(t)\right)^2}\,dt$ ”

Pg 388 “skew invariant deigned” -> “skew invariant designed”

Pg 400 “*local binary patterns* (LPB)” -> “*local binary patterns* (LBP)”

Pg 472 The textbook by Porikli and Davis never materialised

Pg486 as previous and delete citation

Pg498 delete “c_1=” in Eq. 10.33

Pg565 “LAB” -> “CIE L* a* b*”