

# Contents

	<b>Prefaces</b>	<b>7</b>
<b>1</b>	<b>Colour Image Processing</b>	<b>8</b>
1.1	Colour Fundamentals	8
1.2	Colour Space	10
1.3	Colour Image Processing	12
1.4	Smoothing and sharpening	16
1.5	Image segmentation	18
1.6	Colour Image Compression	24
1.7	Summary	27
1.8	References	28
<b>2</b>	<b>Morphological Image Processing</b>	<b>30</b>
2.1	Mathematical morphology	30
2.2	Dilation and Erosion	34
2.3	Opening and closing	41

www.sylvania.com

**We do not reinvent the wheel we reinvent light.**

Fascinating lighting offers an infinite spectrum of possibilities: Innovative technologies and new markets provide both opportunities and challenges. An environment in which your expertise is in high demand. Enjoy the supportive working atmosphere within our global group and benefit from international career paths. Implement sustainable ideas in close cooperation with other specialists and contribute to influencing our future. Come and join us in reinventing light every day.

Light is OSRAM **OSRAM SYLVANIA**



2.4	Hit-or-miss	49
2.5	Thinning and thicken	51
2.6	Skeleton	54
2.7	Pruning	56
2.8	Morphological reconstruction	58
2.9	Summary	61
2.10	References and further reading	61
2.11	Problems	61
<b>3</b>	<b>Image Segmentation</b>	<b>63</b>
3.1	Introduction	63
3.2	Image pre-processing – correcting image defects	64
3.3	Thresholding	67
3.4	Line and edge detection	72
3.5	Segmentation using morphological watersheds	77
3.6	Region-based segmentation	82
3.7	Texture-based segmentation	85
3.8	Segmentation by active contour	86



360°  
thinking.

**Deloitte.**

Discover the truth at [www.deloitte.ca/careers](http://www.deloitte.ca/careers)

© Deloitte & Touche LLP and affiliated entities.



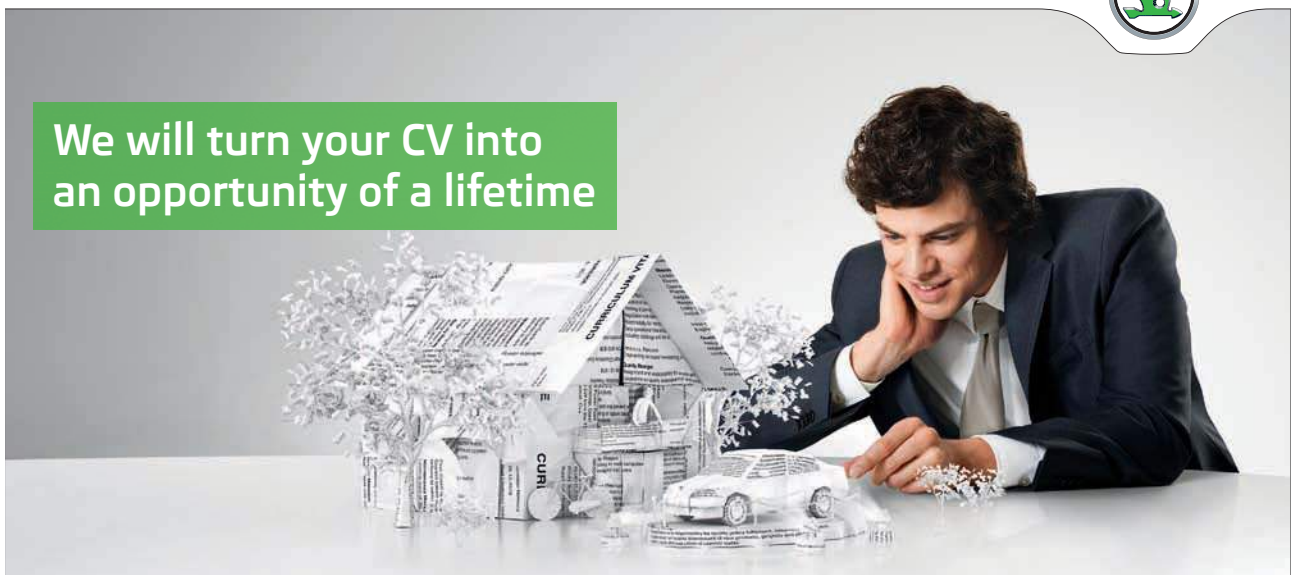
3.9	Object-oriented image segmentation	89
3.10	Colour image segmentation	90
3.11	Summary	91
3.12	References and further reading	91
3.12	Problems	92

SIMPLY CLEVER

ŠKODA



We will turn your CV into an opportunity of a lifetime



Do you like cars? Would you like to be a part of a successful brand? We will appreciate and reward both your enthusiasm and talent. Send us your CV. You will be surprised where it can take you.

Send us your CV on [www.employerforlife.com](http://www.employerforlife.com)

