

CS6350: Computer Vision

References

S.No.	Topics	References
1.	Introduction	G&W-:Chapter 2: Section 2.1
2.	Neighborhood and Connectivity of pixels	G&W-: Chapter 2: Section 2.5
3.	3D transformations and projection	R-Szel-: Chapter2:Section 2.1 H-Zisser-: Chapter 6: Section 6.1, Chapter 2: Section 2.2,2.3 Chapter8:Section 8.4 Chapter 9: Section 9.2,9.3,9.6 Chapter 4: Section 4.1 Chapter 8: Section 8.6 T&Verri-: Chapter 7: Section 7.3.7
4.	Fourier Theory and Filtering in spatial and spectral domains	G&W-: Chapter 4
5.	Enhancement	G&W-: Chapter 3: Section 3.2.4, 3.4, 3.5,5.1,5.6
6.	Histogram based image processing	G&W-: Chapter 3: Section 3.3
7.	Concepts in Edge Detection	G&W-: Chapter 10: Section 10.2
8.	Hough Transform	G&W-: Chapter 10: Section 10.2
9.	Image segmentation	R-Szel-: Chapter 5 G&W-: Chapter 10: Section

		10.3, 10.4
10.	Texture analysis using Gabor filters	Bovik-: Section IV-4.8 G&W-: Chapter 11:section 11.3.3
11.	SCALE-SPACE - Theory and Applications	G&W-: Chapter 4-Section 4.5.4, Chapter 7-Section 7.1.1 Bovik-: Section IV-4.2, Section IV-4.11
12.	Local Feature Detectors and Descriptors	R-Szel-: Chapter 4
13.	Motion	Schalk-: Chapter 5
14.	Motion Detection and Tracking	R-Szel-:Chapter 12-Section 12.6.4
15.	Shape from Shading	R-Szel-: Chapter 12
16.	Pattern Recognition	D-Hart-: Chapter 2:Section 2.4,2.5,2.6,2.9 Chapter 3: Section 3.2, 3.8 Chapter 5: Section 5.2,5.3,5.4,5.5 Chapter 6: Section 6.2, 6.3 Chapter 10:Section 10.4.3
17.	Wavelet transform	G&W-Chapter 7
18.	Morphology	G&W- Chapter 9: Section 9.2, 9.3

References

G&W: Digital Image Processing by Rafael C. Gonzalez and Richard E. Woods; Pearson (3rd Edition).

R-Szel: Computer Vision: Algorithms and Applications by Richard Szeliski; Springer

D-Hart: Pattern Classification by Richard O. Duda, Petre E. Hart, David G. Stork; Wiley (Second Edition)

H-Zisser: Multi View Geometry in Computer Vision by Richard Hartley and Andrew Zisserman; Cambridge (Second Edition)

Schalk: Digital Image Processing and Computer Vision by Robert J. Schalkoff; Wiley

T&Verri: Introductory Techniques for 3-D Computer Vision by Emanuele Trucco, Alessandro Verri

Bovik: Handbook of Image and Video Processing by AL Bovik; Academic press