

MM9155 VISUALIZATION TECHNIQUES

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UNIT I VISUALIZATION

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Introduction – Issues – Data Representation – Data Presentation - Interaction

UNIT II FOUNDATIONS FOR DATA VISUALIZATION

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Visualization stages – Experimental Semiotics based on Perception Gibson's Affordance theory – A Model of Perceptual Processing – Types of Data.

UNIT III COMPUTER VISUALIZATION

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Non-Computer Visualization – Computer Visualization: Exploring Complex Information Spaces – Fisheye Views – Applications – Comprehensible Fisheye views – Fisheye views for 3D data – Non Linear Magnification – Comparing Visualization of Information Spaces – Abstraction in computer Graphics – Abstraction in user interfaces.

UNIT IV MULTIDIMENSIONAL VISUALIZATION

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One Dimension – Two Dimensions – Three Dimensions – Multiple Dimensions – Trees – Web Works – Data Mapping: Document Visualization – Workspaces.

UNIT V CASE STUDIES

9

Small interactive calendars – Selecting one from many – Web browsing through a key hole – Communication analysis – Archival analysis

TOTAL = 45

TEXT BOOKS:

1. Colin Ware, "Information Visualization Perception for Design" Morgan Kaufmann Publishers, 2004, 2nd edition.
2. Robert Spence "Information visualization – Design for interaction", Pearson Education, 2nd Edition, 2007

REFERENCES:

1. Stuart.K.Card, Jock.D.Mackinlay and Ben Shneiderman, "Readings in Information Visualization Using Vision to think", Morgan Kaufmann Publishers.