Detailed Study Plan - Data Visualisation (22DSPC502)

UNIT - Introduction

Day 1 - Jun 01, 2025: Visualization Definition and Need

Day 2 - Jun 02, 2025: Data Abstraction

Day 3 - Jun 03, 2025: Data Semantics and Types

Day 4 - Jun 04, 2025: Data Types, Dataset Types (DL)

Day 5 - Jun 05, 2025: Attribute Types, Semantics

Day 6 - Jun 06, 2025: Task Abstraction - Analyze -> Actions -> Targets

Day 7 - Jun 07, 2025: Analyzing and Deriving

UNIT - Analysis

Day 8 - Jun 08, 2025: Four levels for Validation, Reasons to Validate

Day 9 - Jun 09, 2025: Four levels of Design

Day 10 - Jun 10, 2025: Angles of Attack, Threats to Validity

Day 11 - Jun 11, 2025: Validation Approaches and Examples

Day 12 - Jun 12, 2025: Marks and Channels - Defining and Using

Day 13 - Jun 13, 2025: Effectiveness - Relative vs Absolute Judgements

Day 14 - Jun 14, 2025: Rules of Thumb, No unjustified 3D/2D

Day 15 - Jun 15, 2025: Eyes beat memory, Get it Right in Black and White

UNIT - Tables and Spatial Data

Day 16 - Jun 16, 2025: Arrange Keys and Values

Day 17 - Jun 17, 2025: Express: Quantitative Values

Day 18 - Jun 18, 2025: Separate, Order, Align: Categorical Regions

Day 19 - Jun 19, 2025: Matrix Alignment: Two Keys, Volumetric Grid: Three Keys

Day 20 - Jun 20, 2025: Recursive Subdivision: Multiple Keys

Day 21 - Jun 21, 2025: Spatial Axis Orientation, Spatial Layout Density

Day 22 - Jun 22, 2025: Arrange Spatialdata: Geometry, Scalar, Vector, Tensor Fields

UNIT - Networks, Trees, Map Color

Day 23 - Jun 23, 2025: Connection: Link Marks, Matrix Views

Day 24 - Jun 24, 2025: Containment: Hierarchy Marks

Day 25 - Jun 25, 2025: Map Color and Other Channels, Color Theory

Day 26 - Jun 26, 2025: Reduce items and attributes: Reasons to Reduce

Day 27 - Jun 27, 2025: Filter, Aggregate, Manipulate View

Day 28 - Jun 28, 2025: Change View over Time, Select Elements

Day 29 - Jun 29, 2025: Embed: Elide, Superimpose, Distort

UNIT - Information Dashboard Design

Day 30 - Jun 30, 2025: Dashboards: Purpose and Importance

Day 31 - Jul 01, 2025: Reasons for Failure, Common Mistakes

Day 32 - Jul 02, 2025: Dashboard Design Principles

Day 33 - Jul 03, 2025: Assessing Needs from Dashboards

Day 34 - Jul 04, 2025: Fundamental Considerations in Dashboard Design