DS 4200—F19—Information Presentation and Visualization

Course Schedule

L01—Introduction and Course Overview

F 2019.09.06

Materials

- ☐ Lecture Slides (PDF)

L02—Design Rules of Thumb

T 2019.09.10

Materials

- ☐ Lecture Slides (PDF)
- ☐ In-class activities: `Public - DS 4200 F19' Google Drive folder

Required readings

- ☐ VAD Chapter 1—What is Vis, and Why Do It?
- ☐ VAD Chapter 6—Rules of Thumb

Assignments due

- ☐ Read the syllabus and collect the required supplies

L03—Marks and Channels

F 2019.09.13

Materials

- ☐ Lecture Slides (PDF)
- ☐ In-class activities: `Public - DS 4200 F19' Google Drive folder

Required readings

- ☐ A Tour through the Visualization Zoo (2012) by Jeffrey Heer, Michael Bostock, Vadim Ogievetsky
- ☐ VAD Chapter 5—Marks and Channels

Assignments due

- ☐ Assignment 1—Introduction to Web Development

L04—Data Types

T 2019.09.17

Materials

- ☐ Lecture Slides (PDF)

- ☐ In-class activities: `Public - DS 4200 F19' Google Drive folder and Canvas

Required readings

- ☐ VAD Chapter 2—What: Data Abstraction

Assignments due

- ☐ Assignment 2—Introduction to Web Development (part 2)

L05—Tasks

F 2019.09.20

Materials

- ☐ Lecture Slides (PDF)

Required readings

- ☐ VAD Chapter 3—Why: Task Abstraction

Assignments due

- ☐ Assignment 3—Who Lives in the South End? (Tableau)

L06—Visual Encodings

T 2019.09.24

Materials

- ☐ Lecture Slides (PDF)

Required readings

- ☐ VAD Chapter 7—Arrange Tables
- ☐ Explore datavizcatalogue.com by Severino Ribecca

Assignments due

- ☐ Project 1—Technical Survey
- ☐ Project 2—Shared Ideation

L07—Projects, Gestalt Principles

F 2019.09.27

Materials

- ☐ Lecture Slides (PDF)

Required readings

- ☐ Gestalt Principles (Part 1) by Bang Wong
- ☐ Gestalt Principles (Part 2) by Bang Wong

Assignments due

- ☐ Project 3—Team Charter

- ☐ Project 4—Interview Questions & Plan

L08—Color, Pop-Out Effects, and Illusions

T 2019.10.01

Materials

- ☐ Lecture Slides (PDF)

Required readings

- ☐ VAD Chapter 10—Map Color and Other Channels

Assignments due

- ☐ Project 5—Site Visit, Interview/Visit Reflection, Task Analysis and Abstraction
- ☐ Project 6—Service-Learning Pre-Service Assessment

L09—Altair & Jupyter Lab

F 2019.10.04

Materials

- ☐ In-Class Activity: South End Altair

L10—Interaction

T 2019.10.08

Materials

- ☐ Lecture Slides (PDF)

Required readings

- ☐ VAD Chapter 11—Manipulate View

Assignments due

- ☐ Project 7—Data & Visualization Search, Collection Planning

L11—View & Facet and Linked Data

F 2019.10.11

Materials

- ☐ Lecture Slides (PDF)
- ☐ In-class infographic: Columbus Day

Required readings

- ☐ VAD Chapter 12—Facet into Multiple Views

Assignments due

- ☐ Project 9—Data Exploration *(🚗 parking teams)*

L12—Focus+Context

T 2019.10.15

Materials

- ☐ In-Class Programming Tutorial: D3

Required readings

- ☐ VAD Chapter 14—Embed: Focus + Context

Assignments due

- ☐ Project 8—Data Collection, Photos, and Reflection *(♻ non-parking teams)*

L13—Filtering & Aggregation

F 2019.10.18

Materials

- ☐ In-Class Programming Tutorial: D3 (continued)
- ☐ In-Class Programming: D3 Line Chart

Required readings

- ☐ VAD Chapter 13—Reduce Items and Attributes

Assignments due

- ☐ Project 9—Data Exploration *(♻ non-parking teams)*
- ☐ Project 10—Visualization Sketches *(🚗 parking teams)*

L14—In-Class Project Work

T 2019.10.22 Cody & Uzma away 10.19–26 at VIS!

Assignments due

- ☐ Project 10—Visualization Sketches *(♻ non-parking teams)*

L15—Guest Lecture—Bahare Sanaie-Movahed

F 2019.10.25 Cody & Uzma away 10.19–26 at VIS!

Materials

- ☐ Lecture Slides (PDF)

Required readings

- ☐ VAD Chapter 8—Arrange Spatial Data sections 8.1–8.3

Assignments due

- ☐ Project 11—Final "Interactive" Visualization Sketch (Part A, sketch)

L16—In-Class Project Feedback Meetings

T 2019.10.29

Assignments due

- ☐ Project 11—Final "Interactive" Visualization Sketch (Part B, peer review)
- ☐ Project 8—Data Collection, Photos, and Reflection *(🚗 parking teams)*

L17—Trees and Networks

F 2019.11.01

Materials

- ☐ Lecture Slides (PDF)
- ☐ NodeXL network visualization example (Excel)

Required readings

- ☐ VAD Chapter 9—Arrange Networks and Trees

Assignments due

- ☐ Project 12—To-Do List & Review Group Charter

L18—Geospatial Data

T 2019.11.05

Assignments due

- ☐ Project 13—Implementation Sprint 1 (actually W 11.06)

L19—Spatial, 3D, and Scientific Visualization

F 2019.11.08

Required readings

- ☐ VAD Chapter 8—Arrange Spatial Data sections 8.4–8.7

L20—Validation & Evaluation

T 2019.11.12

Required readings

- ☐ VAD Chapter 4—Analysis: Four Levels for Validation

Assignments due

- ☐ Project 14—Implementation Sprint 2

L21—Storytelling, In-Class Usability Testing

F 2019.11.15

Materials

- ☐ Lecture Slides on Validation & Evaluation (PDF)
- ☐ In-Class Project: Usability Testing

Required readings

- ☐ Storytelling: The Next Step for Visualization by Robert Kosara and Jock Mackinlay

Assignments due

- ☐ Project 15—Implementation Sprint 3

L22—Maps and Storytelling (continued)

T 2019.11.19

Materials

- ☐ Lecture Slides (PDF)

Assignments due

- ☐ Project 16—Implementation Sprint 4 and Usability Results

L23—In-Class Presentations

F 2019.11.22

Assignments due

- ☐ Project 17—In-Class Presentations and Video (Teams 2, 3, 6, 10, 13: Buses and Parking topics)

L24—In-Class Presentations

T 2019.11.26

Assignments due

- ☐ Project 17—In-Class Presentations and Video (Teams 1, 4, 5, 7, 8, 9, 11, 12: Parking, Pedestrians, Bikes, and Green Space topics)
- ☐ Assignment 4—Brushing and Linking in D3

No Class—Thanksgiving!

F 2019.11.29

L25—

T 2019.12.03 Last day of class!

Materials

- ☐ Lecture Slides (PDF)

Assignments due

- ☐ Project 18—Implementation Sprint 5
- ☐ Project 19—Service-Learning Student Evaluation

Final—Service-Learning Project

T 2019.12.10 Finals week!

Assignments due

- ☐ Project 20—Implementation Sprint 6 & Delivery to Partner