

# CIS 4930/6930-902: Scientific Visualization (Fall 2015)

## Project 1: Visualizing Data with Tableau

(Adapted from an assignment created by James Foley)

Overview: This assignment will familiarize you with a full-featured Information Visualization system, Tableau.

Objectives: The goals of the assignment are for you to learn the capabilities provided by Tableau, learn the basic visualization methods that it provides, apply your basic knowledge of visual design, and assess its utility in analyzing data.

Ground Rules: This assignment is intended to be done alone. You may ask others for help with figuring out how to use the program. However, the write-up and its ideas should be developed by you.

### Assignment:

1. Download tableau public— <http://public.tableau.com>
2. Gain familiarity with the tableau—familiarize yourself with the visualization techniques and the user interfaces during the class presentation, and via on-line videos at <http://www.tableausoftware.com/learn/training>.
3. Create a profile and find the available sample data sets (under Resources-> Sample Data Sets). Browse the data sets and select one to use for the rest of this assignment.
4. Once you decide upon a data set, apply Munzner's Nested Model to develop *three interesting questions* about the data set—put yourself in the shoes of a data analyst, and think about all the different kinds of analysis tasks that a person might want to perform with your chosen data set. Then, develop data

abstraction and visual encodings to answer those questions. Do NOT make all of your questions be simply about correlations, min/max values, etc. I'm looking for more depth. IMPORTANT: DO NOT DISCARD BAD VISUALIZATIONS! Please read on...

## 5. Write-up

- Part 1—describe the *final three visualizations*, including the questions you were trying to answer and visual encodings you selected. (length: 1-2 pages, including pictures)
- Part 2—Critique the system. What works? What doesn't? What could be better? (length: ~1 page)
- Part 3—journal your visualizations, both successes and failures. No great detail required, I just want to see your thought process. (length: as long or short as it needs to be)

Submission: Please submit the paper on Canvas by the start of class on the due date. Your document should be in pdf format and has no length requirement. Please use a 12-point font with 1 inch margins, 1.5 line spacing.