Tree Lab: Comparing Treemap and Tableau

Due Tuesday, November 6, 1:00pm

This lab assignment will give you concrete practice in handling hierarchical data in Treemap and Tableau.

Step 1. Upgrade to Tableau 3.5 (beta for now, release next week)

We are currently running Tableau 3.2, which was released in the summer. Tableau 3.5 will be released next week, and its beta testing is now in its final stages. Our key allows us to upgrade to the 3.5 beta immediately. A major improvement in Tableau 3.5 that affects us is the new "packaged workbooks" feature. This Tableau 3.5 feature collects all data files, background maps, and similar items into a unit to support easy sending or posting operations. This will significantly simplify handling of project materials and assignments.

HOW: Go to http://www.tableausoftware.com/beta
username: betauser password: package

DO NOT use the beta key offered on that page. Use our class key, which will work with all versions until December 31, 2007.

PLEASE NOTE: this beta version has an internal hard-coded stop on Tuesday or Wednesday after 3.5 is officially released. This simply means that you will need to download the new release again at that time.

Your current Tableau 3.2 workbooks can be used freely in Tableau 3.5; the reverse is not true.

Step 2. Explore Treemap 4.1

Go to http://www.cs.umd.edu/hcil/treemap/ and download Treemap 4.1

There are a variety of Treemap data files in the data/ subfolder. They have .tm3 extensions; they are specialized Excel files and can be opened with Excel to view the data and its structure.

You can make a version of any of these data files for use with Tableau by removing the 2nd row, which specifies the datatype of each column. Tableau does this step automatically.

View the Treemap Video Tutorial (8:53 mins) and run Treemap. You may wish to play with the nba-no-hierarchy.tm3 data yourself as described in the video, as well as exploring some of the other data files included in the release.

Step 3. Assignment

[I have written this assignment to use the election-no-hierarchy.tm3 data, because the nba-no-hierarchy.tm3 data has a flaw for advanced Tableau use: since the player names are not unique in the file, sorting the view by player ends up aggregating data for players named eg Williams on multiple teams. However, it is richer and potentially more fun. Use it instead if you like. You may not run into this issue, or you may wish to work to address it.]

1. Construct a treemap using the election-no-hierarchy.tm3 data. Create appropriate hierarchical views and explore the data and visualization. Note that you can save your settings in a .tms file.

2. Construct an Excel file of the election-no-hierarchy.tm3 data for use with Tableau. Use Tableau to create a bar chart version showing the same hierarchy as your treemap, coloring it to emphasize similar results. You may wish to add filters or other items to make the two versions have similar functionality.

   Note: Show Mark Borders in the Data menu may be useful.

3. Make another sheet in your Tableau workbook. Try to add additional columns, other data encodings, etc so that the Tableau version can show more information than the Treemap version.

4. Discuss the advantages and disadvantages of the Treemap and Tableau versions.

5. Treemap allows you to print, or you can take screen snapshots. Turn in a printed version of this assignment on Tuesday in class AND submit electronic copy to the class dropbox.