

ASSIGNMENT 9
SPECIAL TOPICS IN EDUCATIONAL DATA MINING
PROFESSOR RYAN S.J.d. BAKER
VISUALIZATION
DUE NOON, MONDAY MAY 6

The goal of this assignment is to produce an interesting visualization, using any of the data sets assigned for previous assignments in this class (e.g. assignment 1, 2, 3, 4, 5, 6, or 8).

You can develop the visualization using any tool you want, including Excel.

You have to use an “advanced visualization”. The following visualizations don’t qualify for this assignment: scatterplots, bar graphs, histograms, area graphs, box-and-whisker plots, and pie charts. Also, visualizations that simply express the results of another algorithm are also not acceptable: for example, visualizations of decision trees or neural networks, or dendograms showing the results of hierarchical agglomerative clustering, or a social network.

Finally, you should use a visualization that is not misleading: using 3D objects to represent 1D data is a classic example of this (if the quantity grows linearly, but the volume of the 3D object grows cubically, that’s a problem).

What does that leave? Lots of stuff: learning curves, moment-by-moment learning graphs, learnograms, activity radar graphs, wattle trees, heat maps, and so on. Being creative is fine for this assignment.

Please turn in:

- The data set you input into the data mining package, if different than the original data set
- The visualization
- A document explaining how you completed the assignment
- An interpretation of what the visualization means.

You will be graded on completeness and comprehensibility of your hand-in, whether you correctly and validly apply the method you chose to this data, and whether the methods you chose fit the requirements of this assignment.

BONUS: The student who succeeds in producing the visualization from which the “most interesting” valid interpretation can be made will receive the bonus. Please identify which interpretation you would like me to consider as most interesting for the bonus, and explain why it is interesting. (Hand-ins which do not do so will not be eligible for the bonus)