



## Data Analysis with MONDRIAN

MONDRIAN is, similar to GGobi, software that allows an interactive exploration of data using statistical graphics. MONDRIAN is freely available at <http://www.rosuda.org/software/>. Download the software and follow the installation instructions. Start the software.

Did you find the installation straightforward? Describe problems you had (if any):

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Now we will look closer into some data sets.

### What is IT?

Download the data IT.txt from <http://www.public.iastate.edu/~hofmann/datasets/>. This data set describes a well-known historical event. The dataset gives counts for population at risk and fatalities resulting from this event. There were 2201 people at risk. Those at risk are categorized by economic status (I -- high or rich, II -- medium, III -- low or poor, and Other), age (child or adult), gender (female or male), and survival status (survived or did not survive).

### Instructions:

Examine the data carefully. Look for any interesting features. To help get a more complete picture of how each of the explanatory variables (economic status, age, and gender) is related to the response variable (survival status), complete the questions below.

After examining the data and completing the questions, give your best “educated guess” as to what historical episode this data set describes.

1. Draw a barchart of survival. What percentage of the population at risk died (approx.)? \_\_\_\_\_%

2. How is gender related to survival? Highlight survivors, draw a barchart of gender and inspect survival percentages. Give approximate percentages of the overall deaths among male and female. Summarize the relationship between survival and gender.  
deaths male \_\_\_\_\_% female \_\_\_\_\_%

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3. Describe the relationship between economic status and survival. Give approximate percentages of survival in each of the four economic status groups. It might be helpful to switch the barchart of economic status into a *spineplot*.

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4. Shortly describe the relationship between age and survival.

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5. Draw a *mosaicplot* of economic status and gender. Highlight survivors (in the barchart of survival). Describe what each of the tiles in the mosaicplot corresponds to:

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Do you think there is an association between economic status, gender and survival? Explain.

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What event in history do you think this data set describes? Explain.

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**Your feedback is valuable!**

Did you like working with the software? How easy was it to use MONDRIAN? Were you able to do what you wanted to do? How intuitive did you find the user interface? What would you change, if you could?

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