University of California, Los Angeles Department of Statistics

Statistics C173/C273

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Lab - Jura data set

These Jura data were collected by the Swiss Federal Institute of Technology at Lausanne. See Goovaerts, P. 1997, "Geostatistics for Natural Resources Evaluation", Oxford University Press, New-York, 483 p. for more details. Data were recorded at 359 locations scattered in space (see figure below).



Concentrations of seven heavy metals (cadmium, cobalt, chromium, copper, nickel, lead, and zinc) in the topsoil were measured at each location. The type of land use and rock type was also recorded for each location. The data can be accessed here:

a <- read.table("http://www.stat.ucla.edu/~nchristo/statistics_c173_c273/jura.txt", header=TRUE)

> names(a)
[1] "x" "y" "Landuse" "Rock" "Cd"
[6] "Co" "Cr" "Cu" "Ni" "Pb"
[11] "Zn"

The variables x, y are the coordinates. Landuse and Rock represent type of land use (forest, pasture, meadow, tillage) and rock type (Argovian, Kimmeridgian, Sequanina, Portlandian, and Quaternary. The other variables are concernitations in ppm of the following chemical elements:

- Cd: Cadmium
- Co: Cobalt
- Cr: Chromium
- ${\tt Cu:}\ {\rm Copper}$
- Ni: Nickel
- Pb: Lead
- Zn: Zinc

Explore this spatial data set in any way you want.