

## Use sparse data set to create contour map

**Problem:** We have a sparse array that include some real data. We want to create a contour map for the data. The data set includes x, y, and the measured values.

**Solution:** I found the following article that provides a complete solution for this problem. Following the link below to read the article.

[Software for Exploratory Data Analysis and Statistical Modelling](#)

Then I wrote a R script to create contour map of my measured data.

```
library(geoR) temp.df = data.frame(y = mydata$row, x = mydata$col, z =
mydata$temp) temp.loess = loess(z ~ x*y, data = temp.df, degree = 2, span = 1)
temp.fit = expand.grid(list(x = seq(1, 16, 0.1), y = seq(1, 4, 0.1))) z =
predict(temp.loess, newdata = temp.fit) temp.fit$Height = as.numeric(z) # basic
image image(seq(1, 16, 0.1), seq(1, 4, 0.1), z, xlab = "X Coordinate", ylab = "Y
Coordinate", main = "Surface temp data") box() # lattice plot library(lattice)
levelplot(Height ~ x*y, data = temp.fit, xlab = "col", ylab = "row", main =
"Surface map", col.regions = terrain.colors(100) )
```