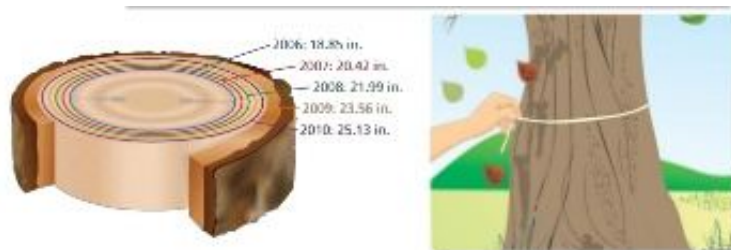


Project: Developing Data Products

Author: Sachin Singh Date: 10/21/2015

Dataset: Growth of Orange Trees



Description

The data describe the growth of orange trees (Table 1, Figure 1). The trunk circumference of 5 trees is measured at 7 different ages, giving a total of 35 datapoints. The Orange data object is among the core datasets that come with R. This dataset was originally part of package nlme, and that has methods (including for `[`, `as.data.frame`, `plot` and `print`) for its grouped-data classes. Source: Draper, N. R. and Smith, H. (1998), Applied Regression Analysis (3rd ed), Wiley (exercise 24.N). & Pinheiro, J. C. and Bates, D. M. (2000) Mixed-effects Models in S and S-PLUS, Springer.

Data Format:

Tree - An ordered factor indicating the tree on which the measurement is made. The ordering is according to increasing maximum diameter.

age - A numeric vector giving the age of the tree (days since 1968/12/31)

circumference - A numeric vector of trunk circumferences (mm). This is probably circumference at breast height, a standard measurement in forestry.

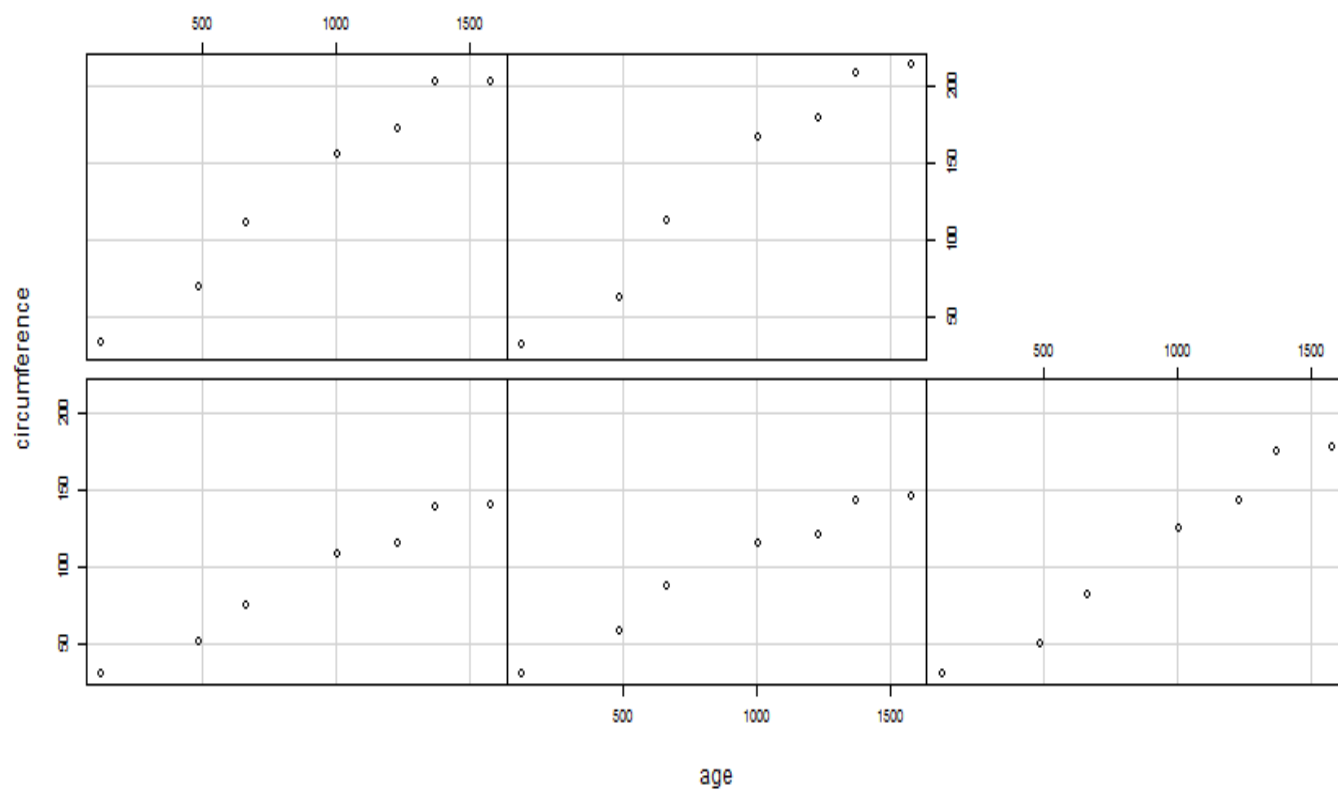
We used self-starting `SSlogis()` function available in R, specifically for fitting logistic models. Using the `SSlogis()` function speeds up the fit by about 15%, because in addition to providing initial conditions `SSlogis()` also returns an analytically computed gradient of the sum-of-squares function.

Select Data:

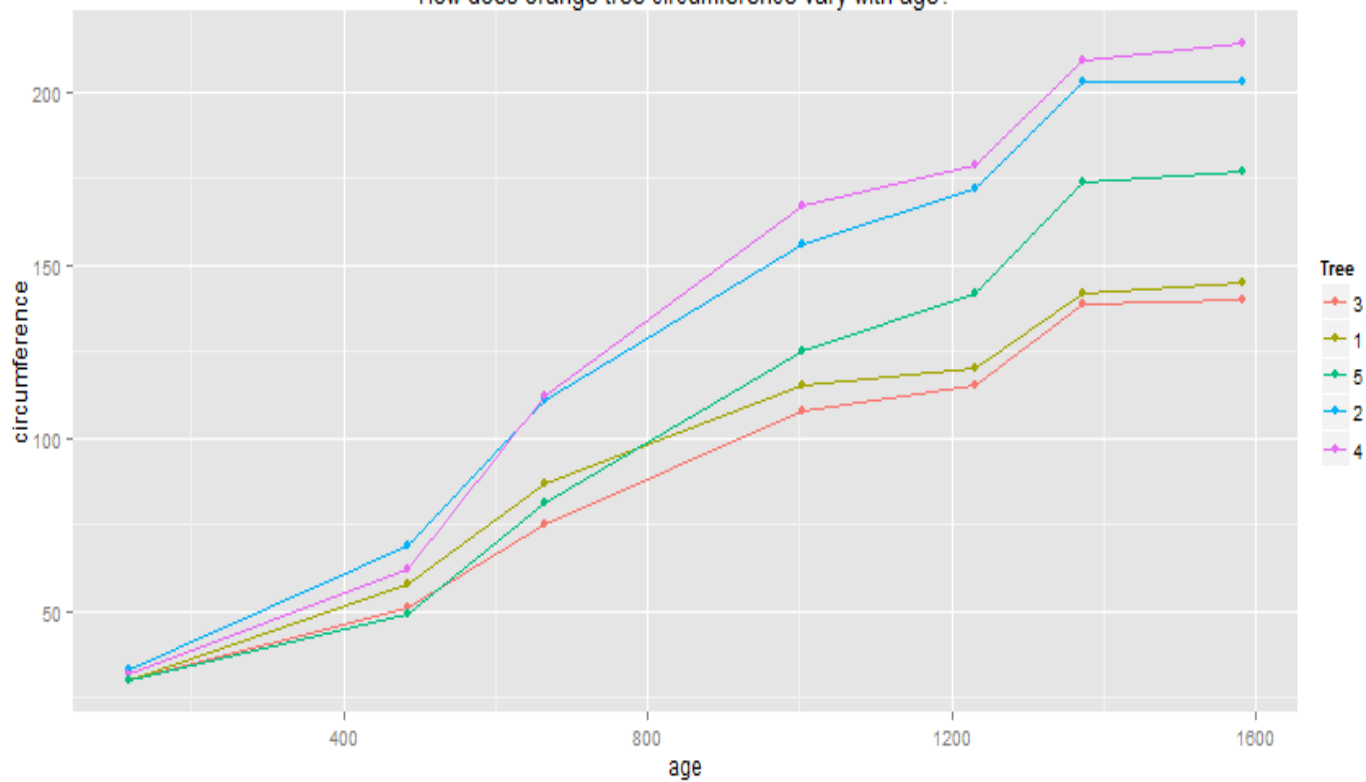
- ☐ Tree 1
- ☐ Tree 2
- ☐ Tree 3
- ☐ Tree 4
- ☐ Tree 5
- ☒ All Trees

Output

Given : Tree



How does orange tree circumference vary with age?



Inputs

Tree No

[1] "A11"

Tree Age (days)

[1] 1200