Statistics Primer Using R

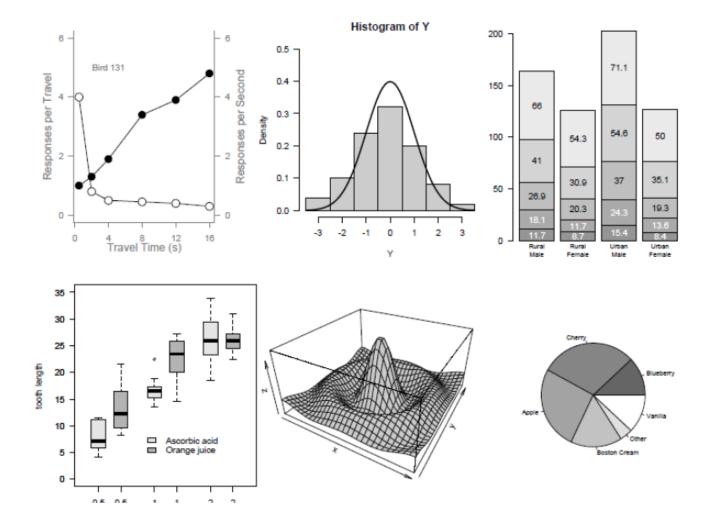
Jing Li

jing.li@sjtu.edu.cn

http://cbb.sjtu.edu.cn/~jingli/ Dept of Bioinformatics & Biostatistics, SJTU



Graphs using R





Primer using R

- Sampling Variability and confidence interval
- Hypothesis testing
- P-values



Practice 1

- The data set BodyTemperature is on the home page.
 Please load the data into R commander.
 - Find the best estimate for the population mean body temp.
 - Calculate the sample mean and sample standard deviation for temperature using R commander.
 - Create a R function, and then calculate the 95% confidence interval for the population mean temp.



Practice 2

- Data set BodyTemperature
 - Calculate the the sample mean and sample standard deviation for HeartRate of the male and female .
 - To examine gender-related differences in heart rate, perform hypothesis test and get the p-value using simulation (normal distribution, two-sided test).
 - Calculate the statistical power using R

