

# Linux and efficient loops



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March 4, 2014

Today we are going to learn...

# Basic R operations under Linux

- The path
- Case sensitive everywhere
- Save image
- Source a piece of R code

# Loops and vectorization

- The traditional `for` and `while` loops
- The concepts of vectorization
- Avoid loops by using vectorization
- What can be vectorized?

## apply() type functions

- Calculate row sums for a matrix with a loop
- Apply `sum()` function to each row of the matrix
- Apply your own function to each row of the matrix.
- The advantage of `apply`

## Lab exercises

- Compare the efficiency of for loop and vectorization for calculating element-wise matrix multiplication.
- Hint: `proc.time()`, `replicate()`