

Machine Learning via Gradient Boosting

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In this module, we're going to explore the gradient boosting algorithm.

Package Installation

The package in question is “gbm”.

```
install.packages("gbm", dependencies = TRUE, verbose = TRUE,  
                 repos = "https://mirrors.tuna.tsinghua.edu.cn/CRAN/")  
  
## Installing package into '/Users/mei/Library/R/3.6/library'  
## (as 'lib' is unspecified)  
  
##  
## The downloaded binary packages are in  
## /var/folders/hm/c3_fjypn62v5xh5b5ygv267m0000gn/T//Rtmp9YMdiw/downloaded_packages  
library(gbm)  
  
## Loaded gbm 2.1.5
```

Dataset

We'll be employing the enhancer prediction dataset to exemplify the application of gradient boosting algorithm. The details for the dataset could be reached [here](#).

```
epdata <- readRDS("../Machine_Learning_Deep_Learning/data/ep_data.rds")  
rownames(epdata) <- c()  
  
set.seed(001)  
data_partition <- sample(2, nrow(epdata), replace = TRUE, prob = c(0.8,0.2))  
train <- epdata[data_partition==1,]  
test <- epdata[data_partition==2,]
```