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//RtmpGbMDNQ/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,]
```