Business Problem: Recommend a best book based on the author, publisher and ratings.

**EDA**

DataSet : Books

Install fallowing packages,

* recommenderlab
* reshape2

Choose the file (Books)

book\_data <- read.csv(file.choose())

View(book\_data)

There are 5000 observations with 5 variables.



# Geting column names

names(book\_data)

[1] "users...1." "Book.Title" "Book.Author"

[4] "Publisher" "ratings...3.

Renaming the columns for readability,

# Renaming column names

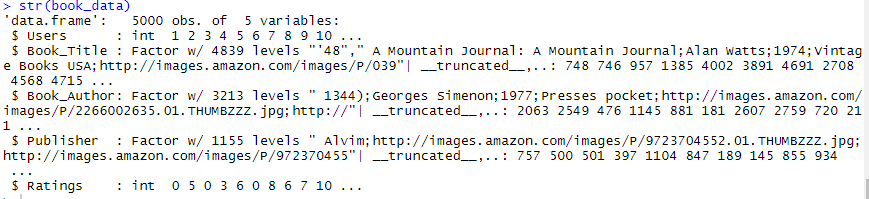
names(book\_data) <- c("Users", "Book\_Title", "Book\_Author", "Publisher", "Ratings")

as.factor(book\_data$Users)

there are 5000 users rated 4839 unique books

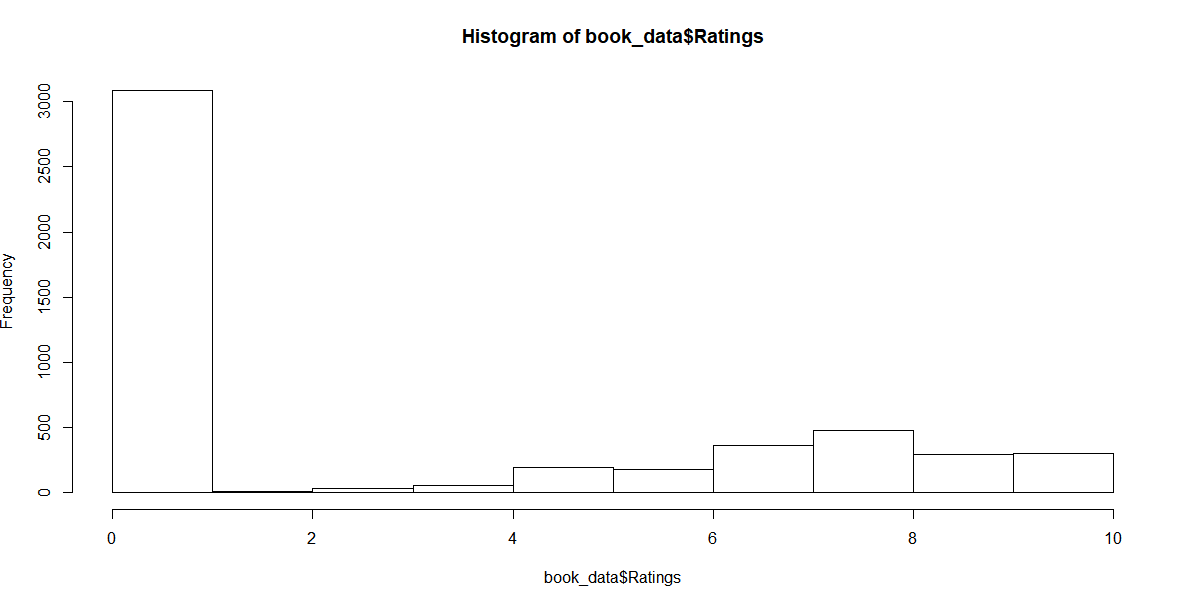
# Structure of data

str(book\_data)



# Distrubution of Rating

hist(book\_data$Ratings)



From the histogram we can observed right skewedness / positively skewed in the dataset.

# Building Recommendation Model

# Popularity based

book\_popular\_model <- Recommender(book\_data\_matrix, method = "POPULAR")

# Building Recomendation Model

# Popularity based

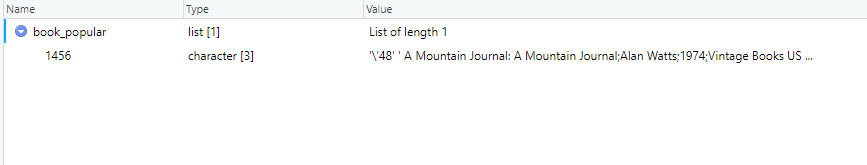
book\_popular\_model <- Recommender(book\_data\_matrix, method = "POPULAR")

# Predictions for two users

recommended\_popular <- predict(book\_popular\_model, book\_data\_matrix[1456], n = 3)

book\_popular <- as(recommended\_popular, "list")

The user id 1456 is recommended by following 3 books,



###--------------------

# User Based Collaborative Filtering

book\_uscf\_model <- Recommender(book\_data\_matrix, method = "UBCF")

# Predictions for two users

recommended\_ubcf <- predict(book\_uscf\_model, book\_data\_matrix[500:550], n=5)

book\_uscf <- as(recommended\_ubcf, "list")

###--------------------

# Item Based Collaborative Filtering

book\_ibcf\_model = Recommender(book\_data\_matrix, method = "IBCF")

# Predictions for two users

recommended\_ibcf <- predict(book\_ibcf\_model, book\_data\_matrix[500:550], n = 1)

book\_uscf <- as(recommended\_ibcf, "list")

###--------------------

# SVD

book\_svd\_model = Recommender(movie\_rate\_data\_matrix, method = "SVD")

# Predictions for two users

recommender\_svd <- predict(book\_svd\_model, movie\_rate\_data\_matrix[500:550], n=5)

book\_svd <- as(recommender\_svd, "list")

###--------------------