Rchess : : CHEAT SHEET

Introduction

Rchess is a R wrapper class for **chessjs**. Rchess can help you **identify, edit,** and **plot** chess positions. It contains multiple helper functions and plotting resources. You can learn more specifics at http://jkunst.com/rchess/.

This Cheat sheet will help you familiarize Rchess.

Installing Rchess

CODE

Rchess can be installed using github, or Rstudio.

```
Install.packages("rchess")
devtools::install_github("jbkunst/rchess")
```

Changing Headers

CODE

Headers can be used to store information about the game. Ex) player, date, site…

```
chss <- Chess$new()

chss$header("White", "Me")
chss$header("Black", "You")
chss$header("Date", Sys.Date())
chss$header("Site", "edav")
```

Initialize New Environment

Key, Value

Loading Positions

FEN and PGN are the two ways of expressing a chess game.

Functions	Description
Load_fen(str)	Load FEN into position
Load_pgn(str)	Load PGN into position

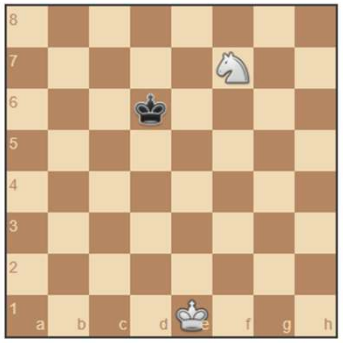
Identify Positions

Functions	Description
Turn	Returns "w" or "b"
Get("c3")	Type = "n" (knight) Color = "w" (white)
Square_color("c3")	Returns "dark" or "light"
Moves()	Returns all legal moves
History()	Returns all moves played

Identify Mate

Functions	Description
In_check()	True or False. Ex) True
In_checkmate()	True or False. Ex) True
Game_over()	True or False. Ex) True

Identify Draws



Functions	Description
In_stalemate()	True or False. Ex) False
In_threefold_repetition()	True or False. Ex) True
Insufficient_Material()	True or False. Ex) True

Edit Positions

```
chss$move("a3")
chss$undo()
```

Chess Data

Rchess contains 1266 intirinsic chess games from the chess wordchampionship in 2011, 2013, 2015.

It also contains the ECO (Encyclopedia of Chess Openings).

```
Data("chesswc")
Data("chessopenings")
```

Plot

There are 3 major ways of outputting chess positions. 1. ASCII 2. Chessjs and 3. ggchessboard(ggplot).
Chessjs is the most aesthetic option.

```
chss$ascii()
plot(chss)
plot(chss, type = "ggplot")
ggchessboard(chss$fen())
```

Bottom 2 have the same plot

You can use ggplot2 grammar

```
##   +------------------------+
## 8 | .  .  .  .  n  .  k  . |
## 7 | p  p  .  .  .  .  .  p |
## 6 | .  .  p  q  .  p  p  . |
## 5 | .  .  .  p  .  .  .  . |
## 4 | .  .  .  P  .  .  .  . |
## 3 | .  .  P  N  Q  .  .  . |
## 2 | P  P  .  .  .  P  P  P |
## 1 | .  .  .  .  .  .  K  . |
##   +------------------------+
##     a  b  c  d  e  f  g  h
```

Citation: http://jkunst.com/rchess/.