Package ‘SportsAnalytics’

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Description The aim of this package is to provide infrastructure for sports analysis. Anyway, currently it is a selection of data sets, functions to fetch sports data, examples, and demos -- with the ambition to develop bit by bit a set of classes to represent general concepts of sports analysis.

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R topics documented:

BundesligaFinalStandings ........................................... 2
BundesligaTransferSums ........................................... 3
concentration_ratio ................................................. 3
EURO4PlayerSkillsSep11 ............................................. 4
fetch_NBAPlayerStatistics ......................................... 6
herfindahl .............................................................. 7
NBAPlayerStatistics0910 ............................................ 8

Index 10
BundesligaFinalStandings

Final German Bundesliga standings

Description
Final German Bundesliga standings from season 1990-1991 to 2009-2010 provided by kicker.de.

Usage
data(BundesligaFinalStandings)

Format
A data frame with 362 observations on the following 12 variables.

- League  Soccer league (here just Bundesliga)
- Season  Bundesliga season (1990-1991 to 2009-2010)
- Position Final position of a team
- Team  Team name
- GamesPlayed Number of games played in the season
- Wins  Number of wins
- Draws  Number of draws
- Losses  Number of losses
- GoalsScored Number of goals scored
- GoalsAgainst Number of goals conceded
- PointsScored Number of points scored
- PointsAgainst Number of points conceded

Source
http://www.kicker.de

Examples
data(BundesligaFinalStandings)
BundesligaTransferSums

Transfer sums of German Bundesliga teams

Description

Transfer sums (takings and spendings) of German Bundesliga teams from season 1990-1991 to 2009-2010 provided by transfermarkt.de.

Usage

data(BundesligaTransferSums)

Format

A data frame with 362 observations on the following 5 variables.

League  Soccer league (here just Bundesliga)
Season  Bundesliga season (1990-1991 to 2009-2010)
Team    Team name
Takings Takings in Euro
Spendings  Spendings in Euro

Source

http://www.transfermarkt.de

Examples

data(BundesligaTransferSums)

concentration_ratio  Concentration ratios

Description

This is a proof-of-concept implementation of concentration ratios for data with an exogenous order.

Usage

concentration_ratio(x, g, ex = order(x, decreasing = TRUE))
Arguments

x Data vector

Exogenous order of the data vector

Value

The concentration ratio value

See Also

Other concentration: exogeny, herfindahl, rosenbluth

Examples

```r
set.seed(1234)
x <- sample(100000, 10)  # Data
o <- sample(10)          # Exogenous order

g <- concentration_ratio(x, 3)
concentration_ratio(x, 3, ex = o)
```

Description

Soccer player skill ratings (Sep 2011) provided by the PES Stats Database.

Usage

```r
data(USDPlayerSkillsSep11)
```

Format

A data frame with 1851 observations on the following 43 variables. The description of the skills are from the PES Stats Database.

- **Name** Player name
- **League** Soccer league (Bundesliga, LaLiga, PremierLeague or SerieA)
- **Team** Team name
- **Number** Squad number
- **Position** Player's position (Goalkeeper < Defender < Midfielder < Forward)
- **Positions** Player's position in more detail
- **Birthday** Birthday
Nationality Nationality
Age Age
Height Height
Weight Weight
InjuryTolerance Injury tolerance (A < B < C)
Foot Main foot, "handedness" (L, R)
Side Preferred side of the field (B, L, R)
Attack Resistance of marker attentions
Defence Performance of challenges and sliding tackles
Balance Stableness
Stamina Endurance
TopSpeed Top speed without ball dribbling
Acceleration Acceleration towards top speed
Response Reaction time
Agility Agility during kicks, tricks, and general movements
DribbleAccuracy Movement with the ball at the feet
DribbleSpeed Top speed during ball dribbling
ShortPassAccuracy Preciseness of passes along the ground
ShortPassSpeed Speed of passes along the ground
LongPassAccuracy Preciseness of airborne passes and crosses
LongPassSpeed Speed of airborne passes and crosses
ShotAccuracy Preciseness of shots
ShotPower Power of shots
ShotTechnique Preciseness of shots
FreeKickAccuracy Preciseness of free kicks
Curling Curling of shots, free kicks, etc.
Header Preciseness of headers
Jump Jump ability
Technique Ball trapping and controlling
Aggression Aggressiveness
Mentality Commitment and drive
KeeperSkills Keeper skills
Teamwork Interaction with teammates
ConditionFitness Fatigue after matches
WeakFootAccuracy Preciseness of kicks with the weaker foot
WeakFootFrequency Frequency of kicks with the weaker foot
Details

The skill ratings are from the PES Stats Database (PSD), a community-based approach to create a database with accurate statistics and skill ratings for soccer players (originally for the video game "Pro Evolution Soccer" by Konami).

Source

http://pesstatsdatabase.com/

Examples

data(EURO4PlayerSkillsSep11)

fetch_NBAPlayerStatistics

Fetch player statistics for NBA season statistics

Description

Fetch player statistics for NBA season statistics

Usage

fetch_NBAPlayerStatistics(season = "09-10", what = c("", ".Home", ".Away"))

Arguments

  season          Season to fetch ("88-89", "89-90".
  what            Complete, home or away statistics

Value

  Data frame; see NBAPlayerStatistics0910 for a description.

Examples

## Not run:
fetch_NBAPlayerStatistics("07-08")
fetch_NBAPlayerStatistics("07-08", what = ".Home")
fetch_NBAPlayerStatistics("07-08", what = ".Away")

## End(Not run)
herfindahl

Concentration indices

Description
This is a proof-of-concept implementation of concentration measures for data with an exogenous order.

Usage
herfindahl(x)
rosenbluth(x)
exogeny(x, ex = order(x))

Arguments
x Data vector
ex Order of the data vector

Value
The concentration index.

See Also
Other concentration: concentration_ratio

Examples
## See demo("concentration-bundesliga") for a real-world application.

set.seed(1234)
x <- sample(100000, 10)

## Classical concentration indices:
herfindahl(x)
rosenbluth(x)

## Exogenous order is available:
o <- sample(10)
exogeny(x, o)
NBA season 2009/2010 player statistics

Description

NBA season 2009/2010 player statistics provided by dougstat.com (via fetch_NBAPlayerStatistics).

Usage

data(NBAPlayerStatistics0910)

Format

A data frame with 441 observations on the following 25 variables.

League  League, here just NBA
Name  Player name (either: last,first -or- last)
Team  Team name (3 letter abrev)
Position  Player’s position (PG, SG, SF, PF or C)
GamesPlayed  Games played
TotalMinutesPlayed  Total minutes played
FieldGoalsMade  Field goals made
FieldGoalsAttempted  Field goals attempted
ThreesMade  Threes made
ThreesAttempted  Threes attempted
FreeThrowsMade  Free throws made
FreeThrowsAttempted  Free throws attempted
OffensiveRebounds  Offensive rebounds
TotalRebounds  Total rebounds
Assists  Assists
Steals  Steals
Turnovers  Turnovers
Blocks  Blocks
PersonalFouls  Personal fouls
Disqualifications  Disqualifications
TotalPoints  Total points
Technicals  Technicals
Ejections  Ejections
FlagrantFouls  Flagrant fouls
GamesStarted  Games started
Source


See Also

fetch_NBAPlayerStatistics.

Examples

data(NBAPlayerStatistics0910)
Index

+ Topic datasets
  BundesligaFinalStandings, 2
  BundesligaTransferSums, 3
  EURO4PlayerSkillsSep11, 4
  NBAPlayerStatistics0910, 8

BundesligaFinalStandings, 2
BundesligaTransferSums, 3

collection_indices (herfindahl), 7
concentration_ratio, 3, 7

EURO4PlayerSkillsSep11, 4
exogeny, 4
exogeny (herfindahl), 7

fetch_NBAPlayerStatistics, 6, 8, 9
herfindahl, 4, 7

NBAPlayerStatistics0910, 6, 8
rosenbluth, 4
rosenbluth (herfindahl), 7