Package: howzatR (via r-universe)

October 31, 2024

Title Useful Functions for Cricket Analysis

Version 1.0.1.9000

Description Helping to calculate cricket specific problems in a tidy & simple manner.

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Imports magrittr, rlang

Suggests testthat (>= 3.0.0)

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Depends R (>= 2.10)

LazyData true

URL https://github.com/lukelockley/howzatR

BugReports https://github.com/lukelockley/howzatR/issues

Repository https://lukelockley.r-universe.dev

RemoteUrl https://github.com/lukelockley/howzatr

RemoteRef HEAD

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Contents

`balls_to_overs` *Convert Balls to Overs (Six Ball)*

Description

Convert numbers of balls as it equates in terms of six ball overs.

Usage

```
balls_to_overs(balls)
```

Arguments

`balls`	number of balls bowled/faced.

Value

number of six ball overs this equates too.

Examples

```
balls_to_overs(balls = 6)
balls_to_overs(balls = 17)
```

`bat_avg` *Batters Average*

Description

Calculates a batter's average over a number of innings.

Usage

```
bat_avg(runs_scored, no_dismissals)
```

Arguments

`runs_scored`	A singular value of the runs scored by a batter.
`no_dismissals`	A singular value of the number of times a batters has been dismissed within those innings.

Value

A singular value showing the batter's average.

Additional Information

A batting average is the number of runs divided by the number of times a batters is dismissed. Batters who remain **not out** at the end of an innings **don't** have that innings count towards the number of dismissals. The higher average typically indicates a higher quality player. More info here.

Examples

```
bat_avg(runs_scored = 568, no_dismissals = 9)
total_runs <- sum(c(45, 123, 56, 12, 192, 34, 78, 3, 25))
bat_avg(runs_scored = total_runs, no_dismissals = 9)
```

---

bat_raw_df *Batters Dataset*

Description

A dataset containing basic data about batters

Usage

```
bat_raw_df
```

Format

A data frame with 3 rows and 5 variables:

Player Name of Player

Inns Numbers of Innings undertaken by Player

NO Numbers of Not Outs by Player

Runs_Scored Numbers of Runs Scored by Player

Balls_Faced Numbers of Balls Faced by Player

---

bat_sr *Batters Strike Rate*

Description

Calculates a batter's strike rate over a number of innings.

Usage

```
bat_sr(runs_scored, balls_faced)
```

Arguments

runs_scored	A singular value of the runs scored by a batter.
balls_faced	A singular value of balls faced by a batter. Overs can be converted into balls_faced using overs_to_balls

Value

A singular value showing the batter's strike rate per 100 Balls.

Additional Information

A batting strike rate is the average number of runs scored per 100 balls. For example, a strike rate of 135 implies a batter would score 135 runs in a 100 balls. A higher number indicates the batter scores at faster rate. More info here.

Examples

```
bat_sr(runs_scored = 568, balls_faced = 600)
total_runs <- sum(c(45, 123, 56, 12, 192, 34, 78, 3, 25))
total_balls <- sum(c(50, 120, 78, 3, 226, 36, 45, 12, 30))
bat_sr(
  runs_scored = total_runs,
  balls_faced = total_balls
)
```

---

bowl_avg *Bowler Average*

Description

Calculates bowlers' average number of runs per wicket taken across overs bowled.

Usage

```
bowl_avg(runs_conceded, wickets_taken)
```

Arguments

runs_conceded	total runs conceded by bowler across the overs bowled.
wickets_taken	total wickets taken across the overs bowled.

Value

Average number of runs per wicket taken across overs bowled.

Additional Information

A bowling average is the average number of runs conceded for wicket taken. A value of 15 indicates an average of 15 runs were conceded per wicket taken. The lower the value, the better the average; the reserve of `bat_avg` More info here.

Examples

```
bowl_avg(runs_conceded = 50, wickets_taken = 6)
bowl_avg(runs_conceded = 341, wickets_taken = 13)
```

---

bowl_econ *Bowler Economy Rate*

Description

Calculates bowlers' economy rate over six ball overs, five ball sets or per hundred balls.

Usage

```
bowl_econ(balls_bowled, runs_conceded, type = "overs")
```

Arguments

`balls_bowled`	number of balls bowled. Data in terms of six ball overs, please convert to `overs_to_balls` to get it terms of `balls bowled`
`runs_conceded`	total runs conceded by bowler across the overs, sets or per hundred balls bowled.
`type`	whether we are calculating economy over six ball overs, sets or per hundred balls bowled. Options "overs", "sets", "per_100". Defaults to overs

Value

Economy rate across the number of overs, sets or per hundred balls bowled.

Additional Information

Bowling economy rate is average number of runs scored per over or sets bowled.

- If using overs, a value of 9.5 indicates an average of 9.5 runs are scored per six ball over bowled.
- If using sets, a value of 9.5 indicates an average of 9.5 runs are scored per five ball set bowled.
- If using here, a value of 9.5 indicates an average of 9.5 runs are scored per hundred balls bowled. This the official statistic used by The Hundred.

  The higher the number the more detrimental is for the bowler. Runs scored through byes & leg byes are **excluded** from runs conceded by the bowler, however wides and no-balls are **included** in the bowler's figures.
  More info here.

Examples

```
bowl_econ(balls_bowled = 60, runs_conceded = 45)
bowl_econ(
  balls_bowled = overs_to_balls(overs = 7.1),
  runs_conceded = 26,
  type = "overs"
)

bowl_econ(balls_bowled = 30, runs_conceded = 35, type = "sets")

bowl_econ(balls_bowled = 22, runs_conceded = 19, type = "per_100")
```

---

bowl_raw_df *Bowling Dataset*

Description

A dataset containing basic data about bowlers

Usage

```
bowl_raw_df
```

Format

A data frame with 3 rows and 4 variables:

Player Name of Player

Balls_Bowled Numbers of Balls Bowled by Player

Runs_Conceded Numbers of Runs Conceded by Player

Wickets Numbers of Wickets taken by Player

---

bowl_sr *Bowler Strike Rate*

Description

Calculates bowlers' number of balls per wicket taken across overs bowled.

Usage

```
bowl_sr(balls_bowled, wickets_taken)
```

Arguments

balls_bowled	number of balls bowled. Data in terms of six ball overs. please convert to overs_to_balls to get it terms of balls bowled
wickets_taken	total wickets taken across the overs bowled.

Value

Number of balls per wicket taken across overs bowled.

Additional Information

A bowling strike rate is defined as the number of legal balls per wicket taken. For example a value of 20 indicates 20 balls bowled are scored per wicket. This the reverse of bat_sr where the lower the number the better. More info here.

Examples

```
bowl_sr(balls_bowled = 3830, wickets_taken = 112)
bowl_sr(balls_bowled = overs_to_balls(overs = 1651.2), wickets_taken = 243)
```

---

overs_to_balls *Convert Overs (Six Ball) to Balls*

Description

Convert Overs (Six Ball) to Balls

Usage

```
overs_to_balls(overs)
```

Arguments

overs	number of six ball overs bowled/faced.

Value

number of six ball overs this equates too.

Examples

```
overs_to_balls(overs = 8.2)
overs_to_balls(overs = 10)
```

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