Package 'toRvik'

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bart_archive

Get T-Rank Archive Ratings

Description

Returns T-Rank ratings and efficiency metrics from the morning of the specified day. Data goes back to 2014-15.

Usage

bart_archive(date)

Arguments

date

Date to pull ratings (YYYYMMDD).

Value

Returns a tibble with 16 columns: #'

rk double.

team character.

conf character.

rec character.

adj_o double.

adj_o_rk double.

bart_coach 3

```
adj_d double.
adj_d_rk double.
barthag double. The estimation of a team's win probability against the average Division 1 team
    on a neutral court.
proj_rec character.
proj_conf_rec character.
wab double. The number of wins above or below the expected total from a bubble team against the
    same schedule.
wab_rk double.
cur_rk double.
change double.
date double.
```

Examples

```
bart_archive('20220113')
```

bart_coach

Get Coaching History and Notable Recruits

Description

Returns coaching history with four factor and tournament finish (tibble one) along with notable recruits (tibble two).

Usage

```
bart_coach(coach)
```

Arguments

coach

Coach to return.

Details

For a brief explanation of each factor and its computation, please visit KenPom's blog. 'rec_rank' is a scale of recruiting ranking, where 100 is a consensus #1 recruit and 0 is unrecruited.

Value

Returns a list of tibbles: 'Coach History' and 'Recruiting History'

```
bart_coach('Mike Krzyzewski')
```

bart_conf_factors

bart_coach_change

Get Head Coach Changes

Description

Returns head coaching changes at the Division 1 level by season.

Usage

```
bart_coach_change(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

Value

Returns a tibble with four columns:

```
team character.
conf character.
old_coach character.
new_coach character.
```

Examples

```
bart_coach_change(year=2015)
```

bart_conf_factors

Get Conference Four Factor Statistics

Description

Returns conference-wide four factor data on a variety of splits, including date range, quadrant level, opponent ranking, game location, and game type.

Usage

```
bart_conf_factors(
  year = current_season(),
  venue = "all",
  type = "all",
  quad = "4",
  top = 0,
  start = NULL,
  end = NULL
)
```

bart_conf_factors 5

Arguments

year	Defaults to current season (YYYY).
venue	Filters by venue; defaults to 'all'.
type	Filters by game type; defaults to 'all'.
quad	Filters by quadrant level; defaults to '4'.
top	Filters by opponent T-Rank position; defaults to NULL (all).
start	Filters by start date; defaults to NULL (full season).
end	Filters by end date; defaults to NULL (full season).

Details

For a brief explanation of each factor and its computation, please visit KenPom's blog. Data can be split on five variables:

```
venue Splits on game location; 'all', 'home', 'away', 'neutral', and 'road' (away + neutral).
type Splits on game type; 'all', 'nc' (non-conference), 'conf' (conference), 'reg' (regular season), 'post' (post-season tournaments), 'ncaa' (NCAA tournament).
quad Splits by quadrant level; 1-4 with 0 indicating 1-A games.
top Splits by opponent T-Rank position, adjusted for game location.
start/end Splits by date range (YYYYMMDD).
```

Value

```
Returns a tibble with 22 columns:
```

```
conf character.
```

barthag double. The estimation of a team's win probability against the average Division 1 team on a neutral court.

```
rec character.
wins double.
games double.
adj_t double.
adj_o double.
off_efg double.
off_to double.
off_tr double.
adj_d double.
def_efg double.
def_efg double.
```

def_or double.

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```
def_ftr double.
```

wab double. The number of wins above or below the expected total from a bubble team against the same schedule.

```
year double.
```

venue character. Split supplied to the venue argument.

type character. Split supplied to the type argument.

top double. Split supplied to the top argument.

quad character. Split supplied to the quad argument.

Examples

```
bart_conf_factors(type='nc')
```

bart_conf_stats

Get Conference Team Statistics

Description

Returns conference-only metrics, strengths of schedule, and bid probabilities (auto and at-large) for all teams in a conference.

Usage

```
bart_conf_stats(year = current_season(), conf = NULL)
```

Arguments

year Defaults to current season (YYYY).
conf Indicates conference (see details).

Details

Accepted conference abbreviations for the 'conf' argument are:

• 'A10', 'ACC', 'AE', 'ASun', 'Amer', 'B10', 'B12', 'BE', 'BSky', 'BSth', 'BW', 'CAA', 'CUSA', 'Horz', 'Ivy', 'MAAC', 'MAC', 'MEAC', 'MVC', 'MWC', 'NEC', 'OVC', 'P12', 'Pat', 'SB', 'SC', 'SEC', 'SWAC', 'SInd', 'Sum', 'WAC', 'WCC'

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Value

```
Returns a tibble with 23 columns:
rk double.
team character.
seed double.
finish character.
conf_rec character.
adj_oe double.
adj_de double.
barthag double. The estimation of a team's win probability against the average Division 1 team
    on a neutral court.
eff_marg double.
con_oe double.
con_oe_rk double.
con_de double.
con_de_rk double.
conf_barthag double.
proj_rec character.
conf_cur_sos double. The current average Barthag rating of conference opponents.
conf_cur_sos_rk double.
conf_fut_sos double. The projected average Barthag rating of conference opponents
conf_fut_sos_rk double.
conf_sos double.
conf_sos_rk double.
auto_prob double. Probability of winning the conference tournament (automatic bid).
bid_prob double. Probability of securing a tournament bid (auto or at-large)
```

```
bart_conf_stats(year=2022, conf='ACC')
```

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bart_factors

Get Four Factor Statistics

Description

Returns four factor data and team records on a variety of splits, including date range, quadrant level, opponent ranking, game location, and game type.

Usage

```
bart_factors(
  year = current_season(),
  venue = "all",
  type = "all",
  quad = "4",
  top = 0,
  start = NULL,
  end = NULL
)
```

Arguments

year	Defaults to current season (YYYY).
venue	Filters by venue; defaults to 'all'.
type	Filters by game type; defaults to 'all'.
quad	Filters by quadrant level; defaults to '4'.
top	Filters by opponent T-Rank position; defaults to NULL (all).
start	Filters by start date; defaults to NULL (full season).
end	Filters by end date; defaults to NULL (full season).

Details

For a brief explanation of each factor and its computation, please visit KenPom's blog. Data can be split on five variables:

```
venue Splits on game location; 'all', 'home', 'away', 'neutral', and 'road' (away + neutral).
type Splits on game type; 'all', 'nc' (non-conference), 'conf' (conference), 'reg' (regular season), 'post' (post-season tournaments), 'ncaa' (NCAA tournament).
quad Splits by quadrant level; 1-4 with 0 indicating 1-A games.
top Splits by opponent T-Rank position, adjusted for game location.
start/end Splits by date range (YYYYMMDD).
```

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Value

```
Returns a tibble with 22 columns:
team character.
conf character.
barthag double. The estimation of a team's win probability against the average Division 1 team
     on a neutral court.
rec character.
wins double.
games double.
adj_t double.
adj_o double.
off_efg double.
off_to double.
off_or double.
off_ftr double.
adj_d double.
def_efg double.
def_to double.
def_or double.
def_ftr double.
wab double. The number of wins above or below the expected total from a bubble team against the
     same schedule.
year double.
venue character. Split supplied to the venue argument.
type character. Split supplied to the type argument.
top double. Split supplied to the top argument.
quad character. Split supplied to the quad argument.
```

```
bart_factors(quad='3', venue='away', start='20220101')
```

bart_game_factors

bart_game_box

Get Team Game Stats

Description

Returns box score data by team for all games.

Usage

```
bart_game_box(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

Details

The home team is coded as 'team2'. Neutral site games may contain errors as to whom is the home team

Value

Returns a tibble of box score statistics

Examples

```
bart_game_box(year=2022)
```

bart_game_factors

Get Game Four Factors

Description

Returns game-by-game four factor statistics.

Usage

```
bart_game_factors(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

bart_injuryimpact 11

Details

For a brief explanation of each factor and its computation, please visit KenPom's blog. 'avg_marg' and 'opp_avg_marg' is the the average lead or deficit during a game.

Value

Returns a tibble of four factor statistics

Examples

```
bart_game_factors(year=2022)
```

bart_injuryimpact

Get Estimated Injury Impact

Description

Returns estimated adjusted ratings in a one-player injury scenario by team.

Usage

```
bart_injuryimpact(year = current_season(), team = NULL, player = NULL)
```

Arguments

year Defaults to current season (YYYY).

team Indicates team.

player Indicates player to remove.

Details

Estimations are experimental and based on 'highly dubious analysis.'

Value

Returns a tibble with five columns:

```
situation character.
```

 $\verb"adj_oe double".$

adj_de double.

barthag double.

rk double.

```
bart_injuryimpact(year=2019, team='Duke', player='Zion Williamson')
```

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bart_player_game

Get Player Game Stats

Description

Returns detailed game-by-game player statistics on a variety of splits.

Usage

```
bart_player_game(year = current_season(), stat = "all")
```

Arguments

year Defaults to current season (YYYY). stat Indicates statistical split (see details).

Details

#' Data is split on three statistical types, explained below:

box Returns basic box score stats; sorts by ppg.

shooting Returns play-by-play shooting splits; sorts by ppg.

adv Returns advanced metrics and possession-adjusted box score statistics; sorts by recruiting rank.

Value

Returns a tibble with the number of columns dependent on the value supplied to the 'stat' argument.

Examples

```
bart_player_game(year=2022, stat='box')
```

bart_player_season

Get Player Season Stats

Description

Returns detailed, season-long player statistics on a variety of splits.

Usage

```
bart_player_season(year = current_season(), stat = "all", conf_only = FALSE)
```

bart_poy 13

Arguments

year	Defaults to current season (YYYY).
stat	Indicates statistical split (see details).
conf only	Logical. Filters data by conference-only play; defaults to 'FALSE'.

Details

Data is split on three statistical types, explained below:

```
box Returns basic box score stats; sorts by ppg.
```

shooting Returns play-by-play shooting splits; sorts by ppg.

adv Returns advanced metrics and possession-adjusted box score statistics; sorts by recruiting rank.

Value

Returns a tibble with the number of columns dependent on the value supplied to the 'stat' argument.

Examples

```
bart_player_season(year=2019, stat='adv', conf_only=TRUE)
```

bart_poy

Get Player of the Year Ratings

Description

Returns Barttorvik Player of the Year ratings on a variety of splits.

Usage

```
bart_poy(
   year = current_season(),
   conf = "All",
   class = NULL,
   conf_only = FALSE
)
```

Arguments

year Defaults to current season (YYYY).

conf Filters results by conference; defaults to all (see details).

class Filters results by class ('fr', 'so', 'jr', 'sr'); defaults to no filter.

conf_only Logical. Filters data by conference-only play; defaults to 'FALSE'.

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Details

Accepted conference abbreviations for the 'conf' argument are:

'A10', 'ACC', 'AE', 'ASun', 'Amer', 'B10', 'B12', 'BE', 'BSky', 'BSth', 'BW', 'CAA', 'CUSA', 'Horz', 'Ivy', 'MAAC', 'MAC', 'MEAC', 'MVC', 'MWC', 'NEC', 'OVC', 'P12', 'Pat', 'SB', 'SC', 'SEC', 'SWAC', 'SInd', 'Sum', 'WAC', 'WCC'

Value

```
Returns a tibble with four columns:
```

```
rk integer.
player character.
team character.
score double.
```

Examples

```
bart_poy(year=2019, class='fr')
```

bart_pregame

Get Pregame Probabilities

Description

Returns pregame win probabilities, expected scores, and thrill quotients for all games.

Usage

```
bart_pregame(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

Details

Under the 'type' column, games are classified by one of five indicators, explained below:

nc Non-conference games between two D-1 teams.

conf In-conference games.

conf_t Conference tournament games.

post Post-conference tournament games.

nond1 Games involving one non-D1 team.

bart_ratings 15

Value

```
Returns a tibble with 13 columns:

date double.

conf character.

line character.

ttq double. Torvik Thrill Quotient – measures how good the teams are, how close the game is projected to be, and how fast the tempo is projected to be.

type character. See details.

team1 character.

team1_wp double. Estimated win percentage.

team1_pts double. Estimated total points.

team2_wp double. Estimated win percentage.

team2_pts double. Estimated total points.

game_id character.

year double.
```

Examples

bart_pregame(year=2022)

bart_ratings

Get T-Rank Ratings

Description

Returns current T-Rank ratings and two forms of strength of schedule.

Usage

```
bart_ratings(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

Details

- 'x_elite_sos' is the percentage of games that an 'elite' team would project to lose against this team's non-conference or overall schedule.
- 'x_cur_sos' is the current average Barthag rating of opponents.
- 'x_fut_sos' is the projected average Barthag rating of opponents.

bart_season_schedule

Value

```
Returns a tibble with 19 columns:
    team character.
    conf character.
    barthag double. The estimation of a team's win probability against the average Division 1 team
         on a neutral court.
    barthag_rk integer.
    adj_o double.
    adj_o_rk integer.
    adj_d double.
    adj_d_rk integer.
    adj_t double.
    adj_t_rk integer.
    wab double. The number of wins above or below the expected total from a bubble team against the
         same schedule.
    nc_elite_sos double.
    nc_fut_sos double.
    nc_cur_sos double.
    ov_elite_sos double.
    ov_fut_sos double.
    ov_cur_sos double.
    seed integer.
    year double.
Examples
    bart_ratings(year=2022)
```

Description

Returns full season schedule for all D-1 teams by year

Usage

```
bart_season_schedule(year = current_season())
```

bart_team_box 17

Arguments

year

Defaults to current season (YYYY).

Details

Function pulls all games involving at least one D-1 team. Under the 'type' column, games are classified by one of four indicators, explained below:

nc Non-conference games between two D-1 teams.

conf In-conference games.

post Post-conference tournament games.

nond1 Games involving one non-D1 team.

Value

Returns a tibble with six columns:

date double.

type character. See details.

neutral logical.

home character.

away character.

game_id character.

Examples

bart_season_schedule(year=2022)

bart_team_box

Get Team Box Stats

Description

Returns team box totals and per-game averages by game type back to 2008.

Usage

```
bart_team_box(year = current_season(), type = "all")
```

Arguments

year Defaults to current season (YYYY).

type Filters by game type; defaults to 'all'.

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Details

Columns ending in 'pg' indicate a per-game average. Unless specified by 'type=d1', results include games against non-Division 1 opponents.

The 'type' argument splits the results by game type, explained below:

```
all All games played.
```

nc Non-conference games.

conf In-conference games.

post Post-conference tournament games.

d1 Games against D-1 teams only.

nond1 Games involving one non-D1 team.

Value

Returns a tibble of team box totals and per-game averages

Examples

```
bart_team_box(type='conf')
```

bart_team_history

Get Team History

Description

Returns efficiency and four factor finish, conference and overall records, and basic shooting percentages by year back to 2008.

Usage

```
bart_team_history(team)
```

Arguments

team

Indicates team to return.

Details

'team' input must be an exact match: 'State' is abbreviated to 'St.' and full names are used where applicable (e.g. 'North Carolina'). For complete list, see 'team' column of bart_ratings.

bart_team_history 19

Value

```
Returns a tibble with 23 columns:
year double.
t_rk double.
coach character.
seed double.
finish character.
conf character.
ov_rec character.
conf_rec character.
adj_o double.
adj_d double.
efg_o double.
efg_d double.
to_percent double.
tod_percent double.
or_percent double.
dr_percent double.
ftr double.
ftrd double.
ft_percent double.
two_pct double.
two_pct_d double.
three_pct double.
adj_t double.
```

```
bart_team_history(team='Charlotte')
```

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bart_team_schedule

Get Team Schedule

Description

Returns full team schedule and game-by-game four factor statistics by year

Usage

```
bart_team_schedule(year = current_season(), team = NULL)
```

Arguments

year Defaults to current season (YYYY).

team Team to return.

Details

For a brief explanation of each factor and its computation, please visit KenPom's blog. 'lead_diff' is the average lead or deficit during a game for the team.

Value

Returns a tibble of game-by-game four factors by team

Examples

```
bart_team_schedule(year=2022, team='Duke')
```

bart_team_shooting

Get Team Shooting Splits

Description

Returns team shooting totals and shares by shot location. Data returns back to 2010.

Usage

```
bart_team_shooting(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

bart_team_shooting 21

Details

'x_share' represents the percentage of made FGs that fall under that category.

Value

```
Returns a tibble with 20 columns:
team character.
seed double.
conf character.
dunk_fg character.
dunk_share double.
dunk_fg_d character.
dunk_share_d double.
close_fg character.
close_share double.
close_fg_d character.
close_share_d double.
far_fg character.
far_share double.
far_fg_d character.
far_share_d double.
three_fg character.
three_share double.
three_fg_d character.
three_share_d double.
year double.
```

```
bart_team_shooting(year=2019)
```

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bart_tourney_odds

Get NCAA Tournament Odds

Description

Returns a tibble with round-to-round tournament probabilities. Data runs back to the 2018 tournament; region is only avaliable for the 2022 tournament.

Usage

```
bart_tourney_odds(year = current_season(), odds = "current")
```

Arguments

year Defaults to current season (YYYY).

odds Filters results by odds, defaults to current (see details).

Details

```
odds splits the data by four variables:
```

current Returns to-date odds.

pre Returns pre-tournament odds

recent Returns adjusted odds over the last ten games

t100 Returns odds against top 100 opponents.

Value

```
Returns a tibble with 10 to 11 columns (depending on year input): #'
```

seed double.

region character. Only avaliable for year >= 2022

team character.

conf character.

r64 double.

r32 double.

s16 double.

e8 double.

f4 double.

f2 double.

champ double.

```
bart_tourney_odds(year=2022, odds='pre')
```

bart_tourney_results 23

Description

Returns a tibble with raw and adjusted NCAA tournament results by team, coach, conference, or seed back to 2000.

Usage

```
bart_tourney_results(
  min_year = 2000,
  max_year = current_season(),
  type = "team"
)
```

Arguments

min_year Minimum year to pull – defaults to 2000 (YYYY).

max_year Maximum year to pull – defaults to current season (YYYY).

type Data split value, defaults to team ('team', 'coach', 'conf', 'seed').

Details

- PASE is the number of wins above or below the expected value given a seed.
- PAKE is the number of wins above or below the expected value given a KenPom rating.

Value

Returns a tibble of adjusted and raw tournament results.

```
bart_tourney_results(min_year=2010, max_year=2015, type='conf')
```

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bart_tourney_sheets (

Get Committee Tournament Sheets

Description

Returns a tibble with similar quality and resume metrics used by the NCAA seeding committee. Data runs back to the 2019 tournament.

Usage

```
bart_tourney_sheets(year = current_season())
```

Arguments

year

Defaults to current season (YYYY).

Value

```
Returns a tibble with 16 columns:
```

team character.

seed double.

net double.

kpi double.

sor double.

res_avg double. Average of resume rankings (NET, KPI, and SOR).

bpi double.

kp double.

sag double.

qual_avg double. Average of quality rankings (BPI, KP, and Sag).

q1a character.

q1 character.

q2 character.

q1_2 character.

q3 character.

q4 character.

```
bart_tourney_sheets(year=2019)
```

bart_transfers 25

bart_transfers	Get Transfer Portal Statistics	

Description

Returns detailed, season-long player statistics on a variety of splits for all portal players for 2022-23. Transfer information is sourced from Verbal Commits and is updated every 20 minutes. Commit information is updated roughly every 18 hours.

Usage

```
bart_transfers(stat = "all", conf_only = FALSE, active = TRUE)
```

Arguments

stat Indicates statistical split (see details).

conf_only Logical. Filters data by conference-only play; defaults to 'FALSE'.

active Logical. Filters players by portal status – active vs. committed; defaults to

TRUE (active).

Details

Data is split on three statistical types, explained below:

box Returns basic box score stats.

shooting Returns play-by-play shooting splits.

adv Returns advanced metrics and possession-adjusted box score statistics.

Value

Returns a tibble with the number of columns dependent on the value supplied to the 'stat' argument.

Examples

```
bart_transfers(stat='box')
```

Description

Returns current season in YYYY format; used as default season in package functions.

Usage

```
current_season()
```

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