



SPORTS ANALYTICS

Brøndby AS

Kvinder & Fodbold



PRIMERA DIVISIÓN FEMENINA TABLE

#	Team	MP	D	P
1	Barcelona	27	+138	81
2	Real Sociedad	27	+20	59
3	Atlético Madrid	27	+37	53
4	Real Madrid	27	+8	53
5	Granadilla Ten...	27	+2	53

Kvinder vs mænd?

længden af afleveringer

antal frispark

antal skud

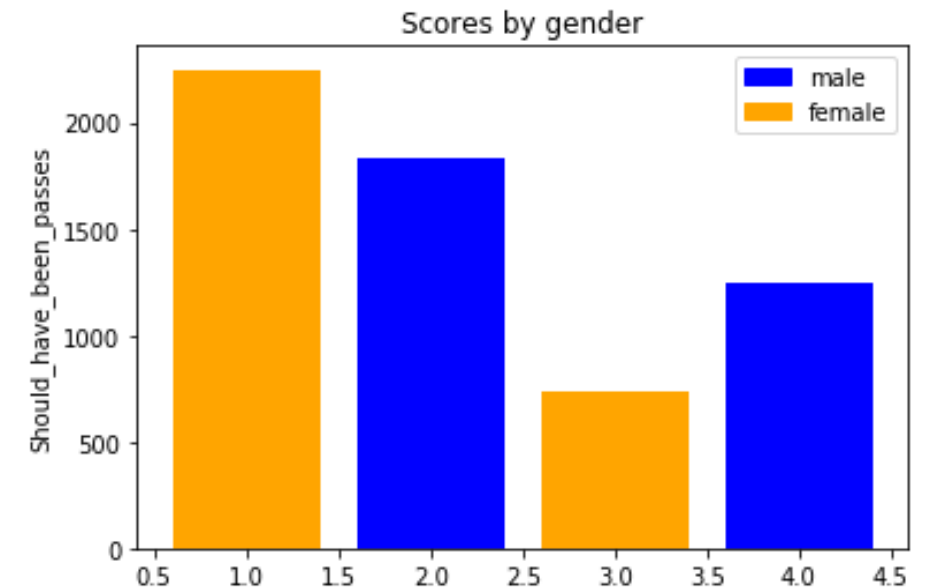
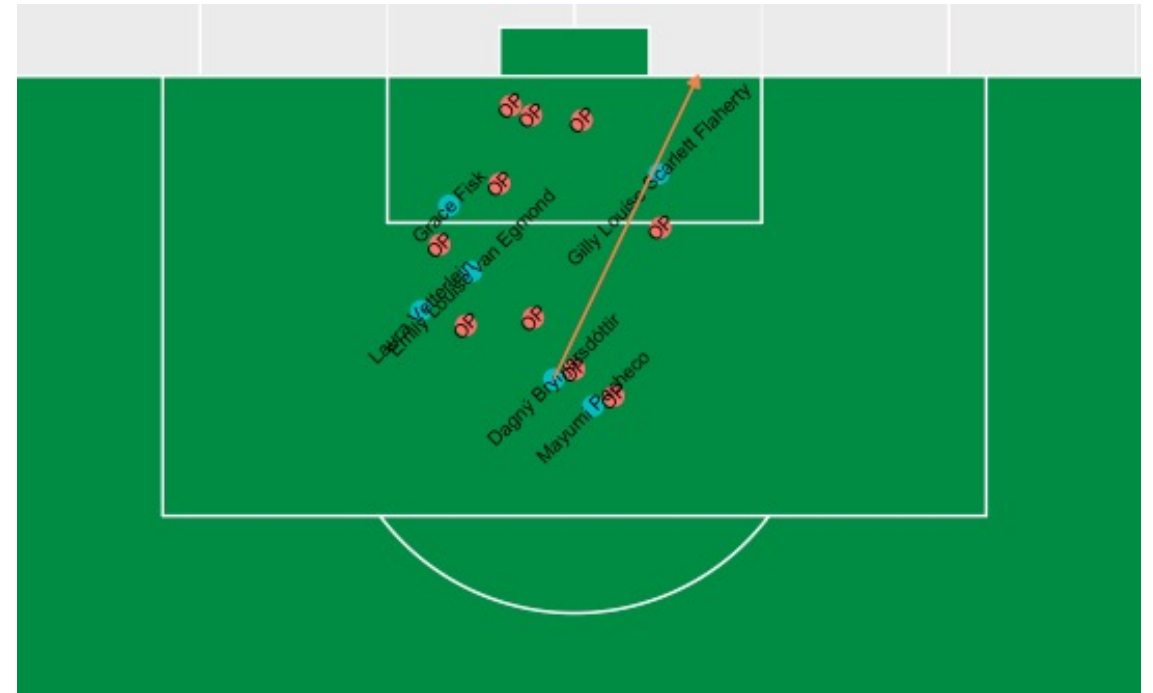
antal lange afleveringer

antal boldtab

hastighed på skud

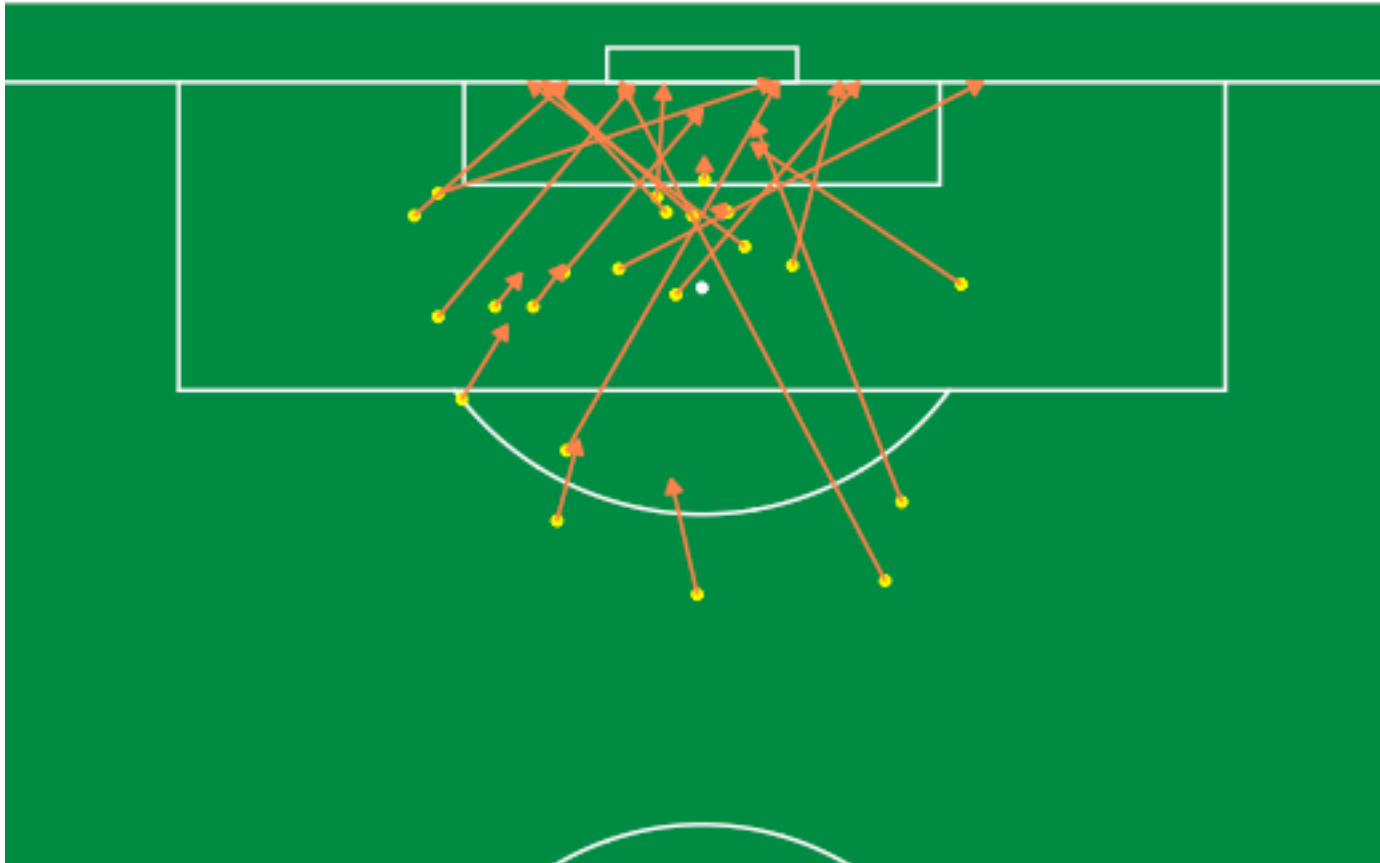
Agenda

- Intro til Git
 - push
- Overview Statsbomb
 - lineups
 - events
 - matches
- Events – shots
 - import fra statsbomb
 - all shots one match
 - one shot – position
 - ggsoccer
 - all shots – position and arrow
 - one shot - freezeframe



```
shots <- data.frame(x = c(90, 85, 82, 78, 83, 74, 94, 91),
                    y = c(43, 40, 52, 56, 44, 71, 60, 54))
```

Plot all shots in one game



	location	shot.end_location
1	c(113.3, 41.9)	c(119.8, 41.6, 1.6)
2	c(112.2, 40.4)	c(120, 46.7, 1.6)
3	c(110.4, 38.2)	c(120, 47.3, 1.3)
4	c(106.3, 51.1)	c(119.8, 42.9, 1.3)
5	c(112.2, 52.1)	c(120, 45.7, 0.2)
6	c(98.5, 45.7)	c(120, 36.8, 1.2)
7	c(112.4, 41.5)	c(120, 46.6, 1.5)
8	c(90.1, 40.2)	c(96.8, 41.3)
9	c(107.6, 41.1)	c(120, 33.4, 1.9)
10	c(109.3, 36.2)	c(120, 34.2, 1.6)
11	c(90.9, 32.3)	c(120, 43.4, 5.9)
12	c(95.5, 31.6)	c(117.7, 37.8, 1.4)
13	c(114.3, 39.9)	c(115.6, 39.9, 0.3)
14	c(101.5, 50.1)	c(105.8, 48.2, 0)
15	c(94.4, 46.1)	c(99.1, 45.2)
16	c(112.4, 38.9)	c(112.6, 39.6)

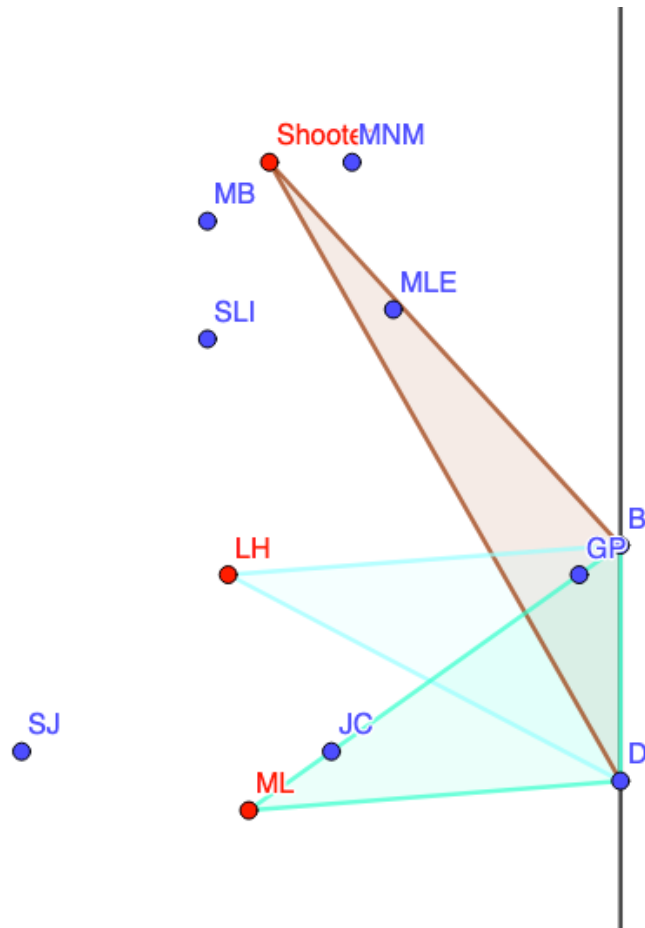
Kvinder & Fodbold

Kvinder & Fodbold

Find all non-teammates

For each teammate

compute number of nont in triangle



	location	shot.end_location	shot.freeze_frame.location	shot.freez
1	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(98.5, 58.2)	TRUE
2	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(118.4, 42.8)	FALSE
3	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(111.8, 42.9)	TRUE
4	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(109.1, 43.8)	FALSE
5	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(106.9, 61.6)	FALSE
6	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(110.3, 52.5)	FALSE
7	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(112, 49.6)	FALSE
8	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(97.4, 56.1)	FALSE
9	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(106.9, 44.4)	TRUE
10	c(112.2, 52.1)	c(120, 45.7, 0.2)	c(115.3, 51.6)	FALSE

	location	shot.end_location
1	c(112.2, 52.1)	c(120, 45.7, 0.2)

	location	shot.end_location
1	112.2	120.0
2	52.1	120.0
3	112.2	45.7
4	52.1	45.7

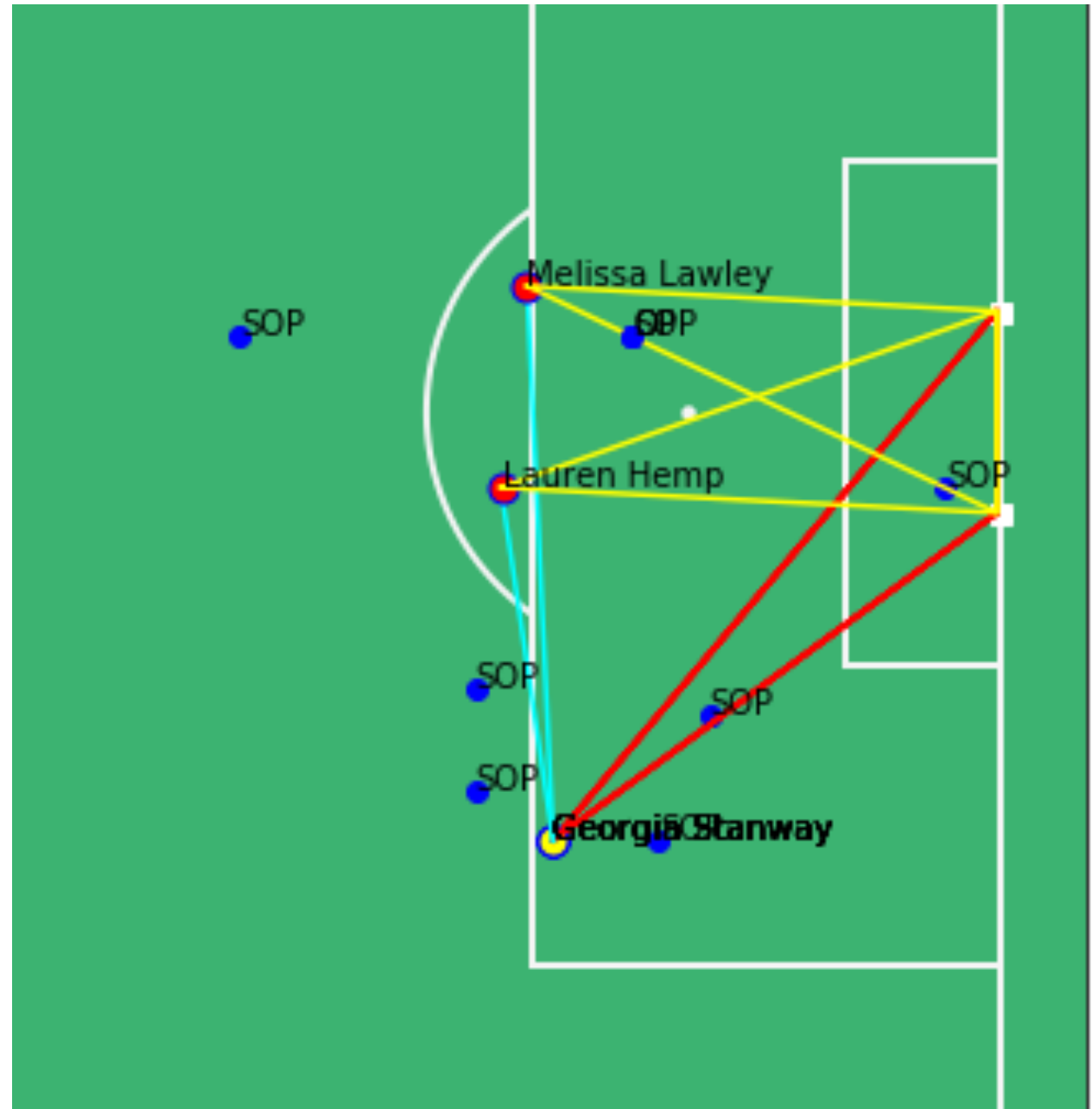
Kvinder & Fodbold Freeze-Frame

- Number of players in tri
- Distance of pass to teamplayer
- Distance to passline from opponent
- Teamplayer xG
 - Distance, angle

This frame:

If for all team-others
shooter tri < other tri
AND
Other gdist < (shooter + tol)
AND
Passdist Shooter-Other-ratio > 0.2
Then
should have been a pass

Conclusion: Should have been a pass



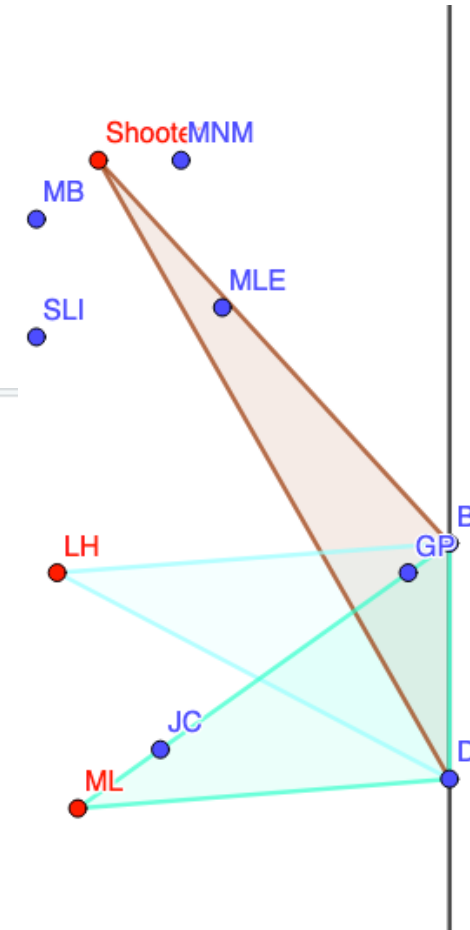
Kvinder & Fodbold

Find all non-teammates

For each teammate

compute number of nont in triangle

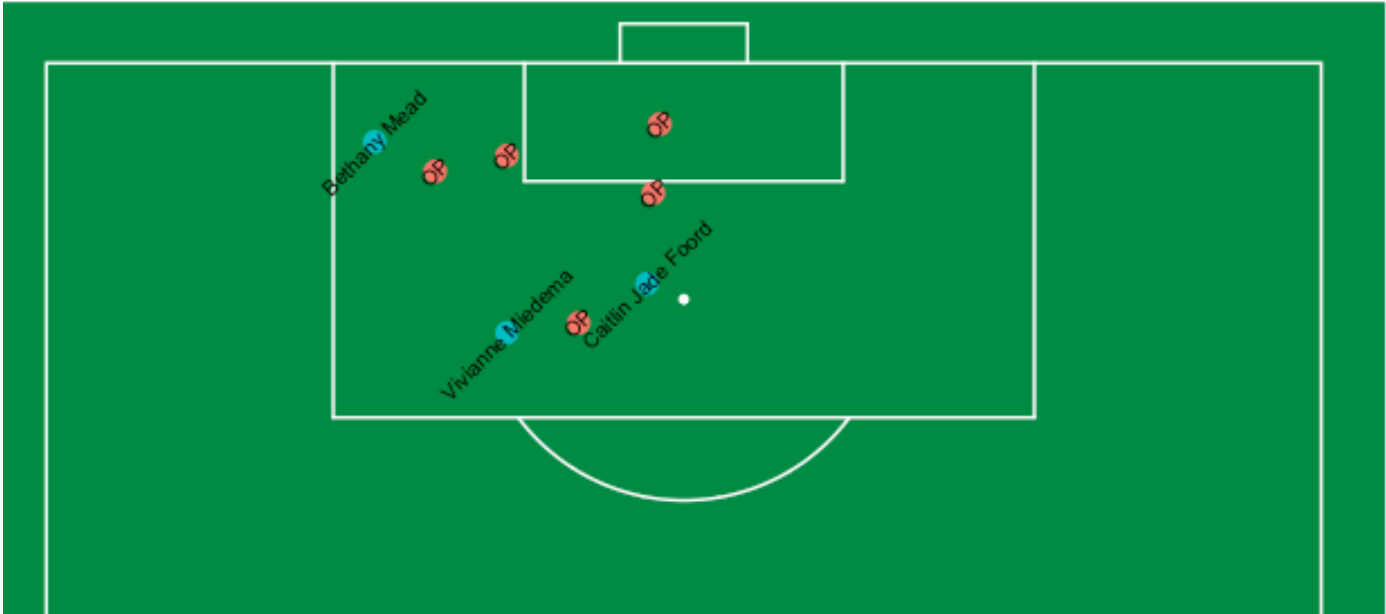
	location	player\$id	player\$name	position\$id	position\$name	teammate
1	c(116, 59.4)	15619	Bethany Mead	12	Right Midfield	TRUE
2	c(108.8, 42.3)	11338	Caitlin Jade Foord	19	Center Attacking Midfield	TRUE
3	c(116.9, 41.5)	42787	Mackenzie Arnold	1	Goalkeeper	FALSE
4	c(115.3, 51.1)	31157	Hawa Cissoko	5	Left Center Back	FALSE
5	c(114.5, 55.6)	15724	Mayumi Pacheco	8	Left Wing Back	FALSE
6	c(113.4, 41.9)	34232	Grace Fisk	4	Center Back	FALSE
7	c(106.8, 46.6)	10124	Dagný Brynjarsdóttir	21	Left Wing	FALSE
8	c(110.6, 37)	18151	Gilly Louise Scarlett Flaherty	3	Right Center Back	FALSE



Kvinder & Fodbold

	team.name	player.name	position.id	shot.end_location	shot.outcome.name	shot.freeze_frame
1	Arsenal WFC	Vivianne Miedema	23	c(119.8, 42.9, 1.3)	Saved	1 variable

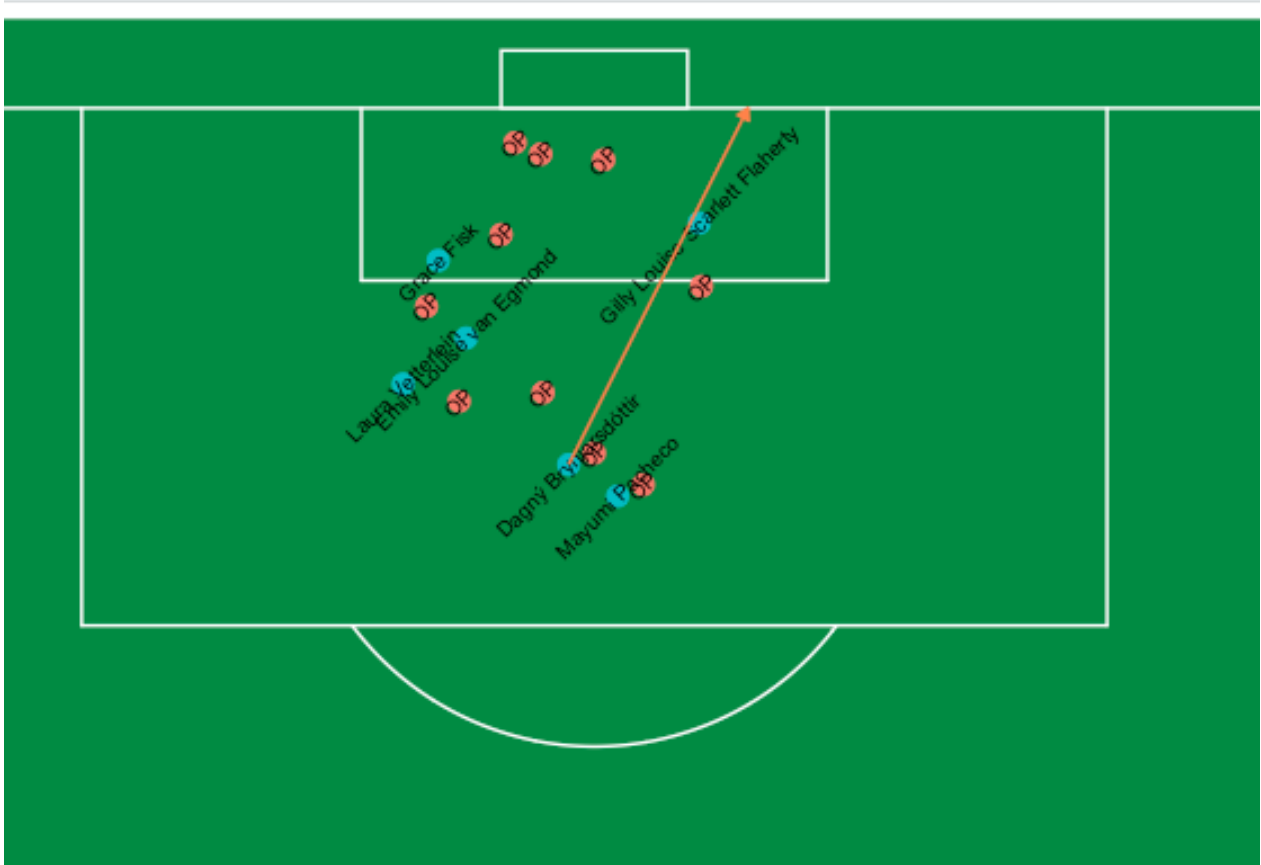
	location	player.id	player.name	position.id	position.name	teammate
1	c(116, 59.4)	15619	Bethany Mead	12	Right Midfield	TRUE
2	c(108.8, 42.3)	11338	Caitlin Jade Foord	19	Center Attacking Midfield	TRUE
3	c(116.9, 41.5)	42787	Mackenzie Arnold	1	Goalkeeper	FALSE
4	c(115.3, 51.1)	31157	Hawa Cissoko	5	Left Center Back	FALSE
5	c(114.5, 55.6)	15724	Mayumi Pacheco	8	Left Wing Back	FALSE
6	c(113.4, 41.9)	34232	Grace Fisk	4	Center Back	FALSE
7	c(106.8, 46.6)	10124	Dagný Brynjarsdóttir	21	Left Wing	FALSE
8	c(110.6, 37)	18151	Gilly Louise Scarlett Flaherty	3	Right Center Back	FALSE



Kvinder & Fodbold

	team.name	player.name	location	shot.end_location	shot.outcome.name	shot.freeze_frame
1	West Ham United LFC	Dagný Brynjarsdóttir	c(107.6, 41.1)	c(120, 33.4, 1.9)	Off T	1 variable

	x	y	name	team	shooter
1	107.6	41.1	Dagný Brynjarsdóttir	TRUE	5
2	106.9	37.9	OP	FALSE	2
3	118.4	42.3	OP	FALSE	2
4	109.8	45.8	OP	FALSE	2
5	113.1	47.2	OP	FALSE	2
6	115.6	44.0	OP	FALSE	2
7	118.8	43.4	OP	FALSE	2
8	110.1	42.2	OP	FALSE	2
9	113.8	35.4	OP	FALSE	2
10	118.2	39.6	OP	FALSE	2
11	108.0	40.0	OP	FALSE	2
12	112.0	45.5	Emily Louise van Egmond	TRUE	2
13	110.4	48.2	Laura Vetterlein	TRUE	2
14	116.0	35.5	Gilly Louise Scarlett Flaherty	TRUE	2
15	114.7	46.7	Grace Fisk	TRUE	2
16	106.5	39.0	Mayumi Pacheco	TRUE	2

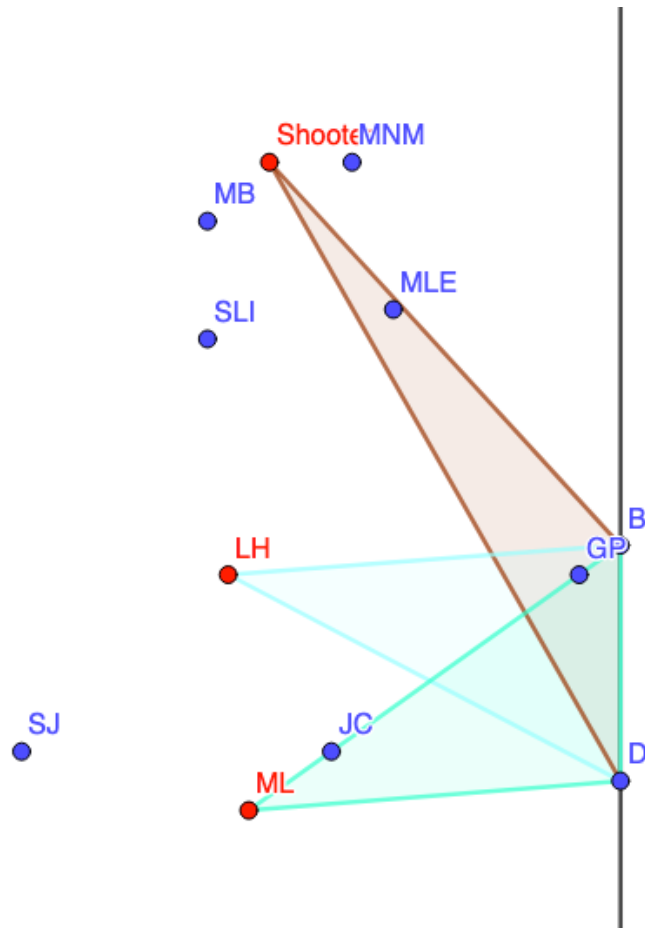


Kvinder & Fodbold

Find all non-teammates

For each teammate

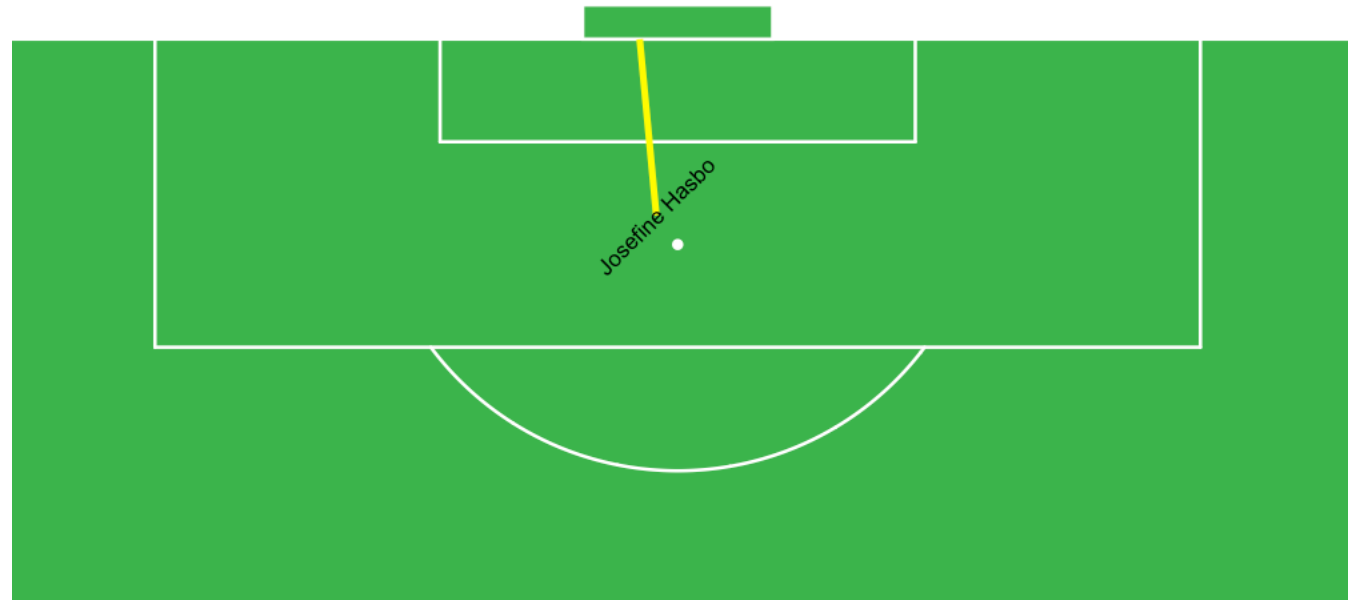
compute number of nont in triangle



```
freeze_frame: [
  {
    location: [ 102, 35 ],
    player: { id: 15547, name: 'Melissa Lawley' },
    position: { id: 24, name: 'Left Center Forward' },
    teammate: true
  },
  {
    location: [ 101, 43 ],
    player: { id: 15555, name: 'Lauren Hemp' },
    position: { id: 22, name: 'Right Center Forward' },
    teammate: true
  },
  {
    location: [ 118, 43 ],
    player: { id: 4640, name: 'Rut Hedvig Lindahl' },
    position: { id: 1, name: 'Goalkeeper' },
    teammate: false
  },
  {
    location: [ 109, 52 ],
    player: { id: 4633, name: 'Magdalena Lilly Eriksson' },
    position: { id: 5, name: 'Left Center Back' },
    teammate: false
  },
  {
    location: [ 100, 51 ],
    player: { id: 15549, name: 'Sophie Louise Ingle' },
    position: { id: 9, name: 'Right Defensive Midfield' },
    teammate: false
  },
  {
    location: [ 100, 55 ],
    player: { id: 4642, name: 'Millie Bright' },
    position: { id: 3, name: 'Right Center Back' },
    teammate: false
  },
  {
    location: [ 91, 37 ],
    player: { id: 4647, name: 'So-Yun Ji' },
    position: { id: 19, name: 'Center Attacking Midfield' },
    teammate: false
  },
  {
    location: [ 107, 57 ],
    player: { id: 10395, name: 'Maren Nævdal Mjelde' },
    position: { id: 11, name: 'Left Defensive Midfield' },
    teammate: false
  },
  {
    location: [ 106, 37 ],
    player: { id: 19422, name: 'Jessica Carter' },
    position: { id: 2, name: 'Right Back' },
    teammate: false
  }
]
```

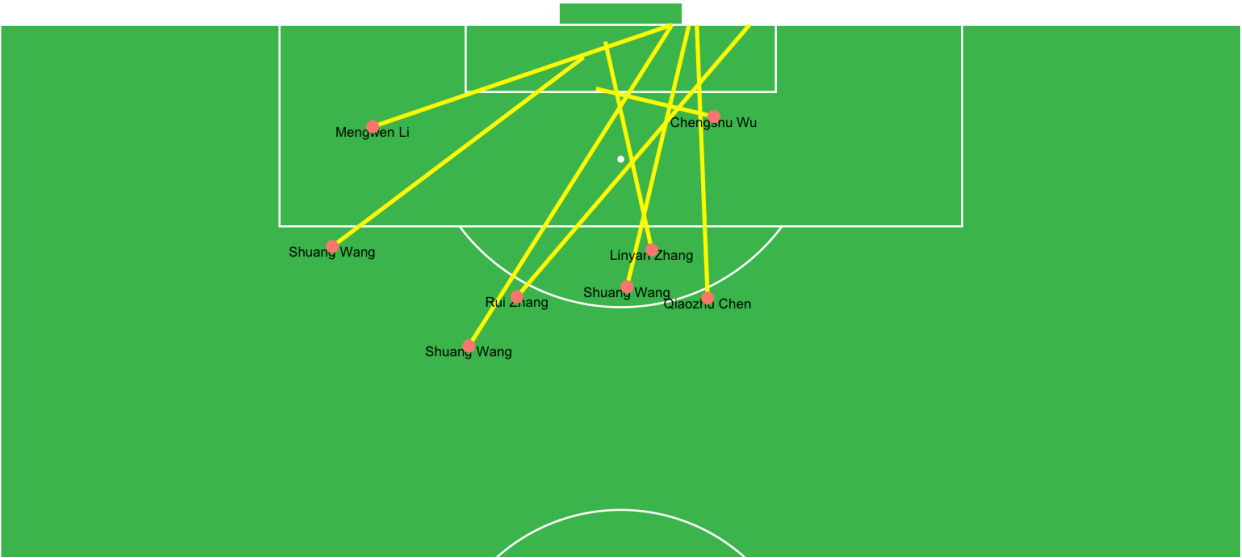
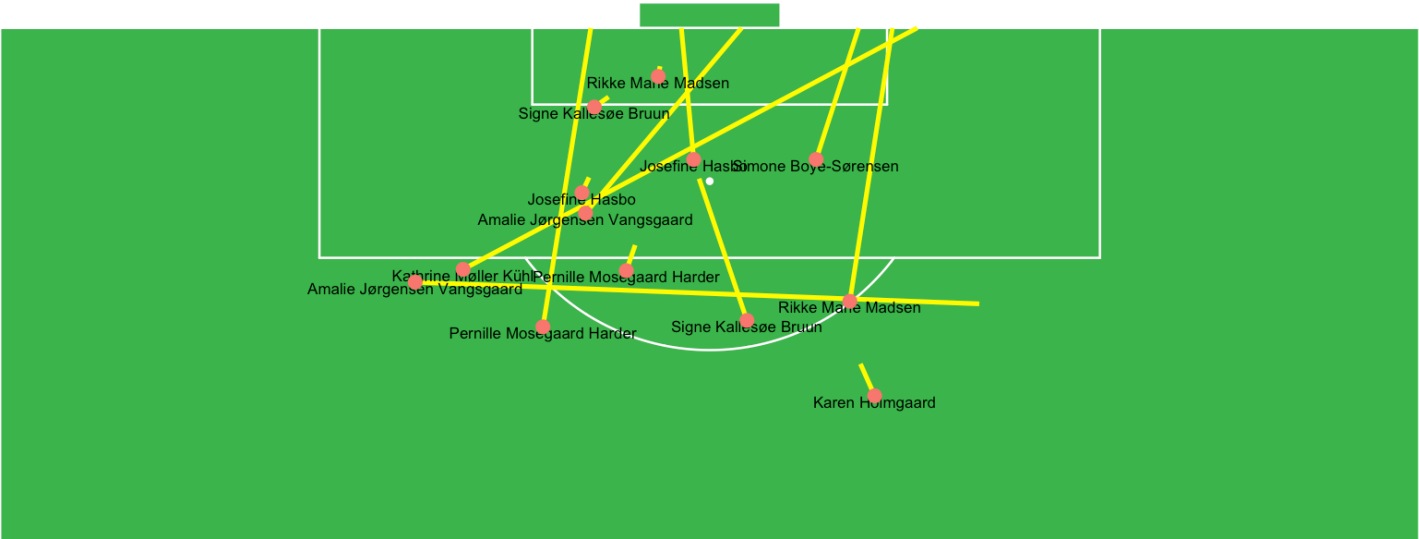
Kvinder & Fodbold

Single shot



Kvinder & Fodbold

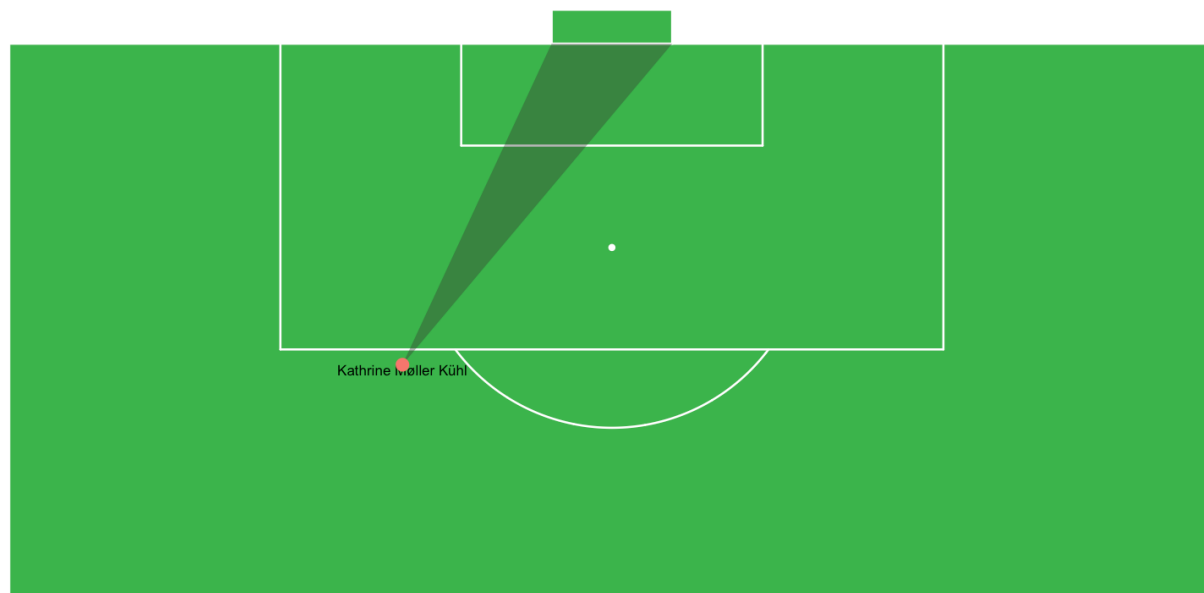
All shots – home & away



team.name
● China PR Women's

Kvinder & Fodbold

Single shot - tri



team.name

● Denmark Women's

Kvinder & Fodbold

Lav denne Shiny-app ud fra Statsbombdata (Danmark-Kina). den skal indeholde flg commits:

- 1) ui-template
- 2) spiller-element populere dynamisk
- 3) server-output med ggplot uden trekant
- 4) ui-element checkbox tilføjet
- 5) server-output med ggplot som afhænger af checkbox



Kvinder & Fodbold

Freeze Frame case



Kvinder & Fodbold

Lav en Shiny-app om freeze-
framen ud fra
Statsbombdata (Danmark-Kina).
den skal indeholde flg commits:

- 1) ui-template
- 2) spiller-element populeret
dynamisk
- 3) server-output med ggplot
uden trekant
- 4) ui-element checkbox tilføjet
- 5) server-output med ggplot
som afhænger af checkbox

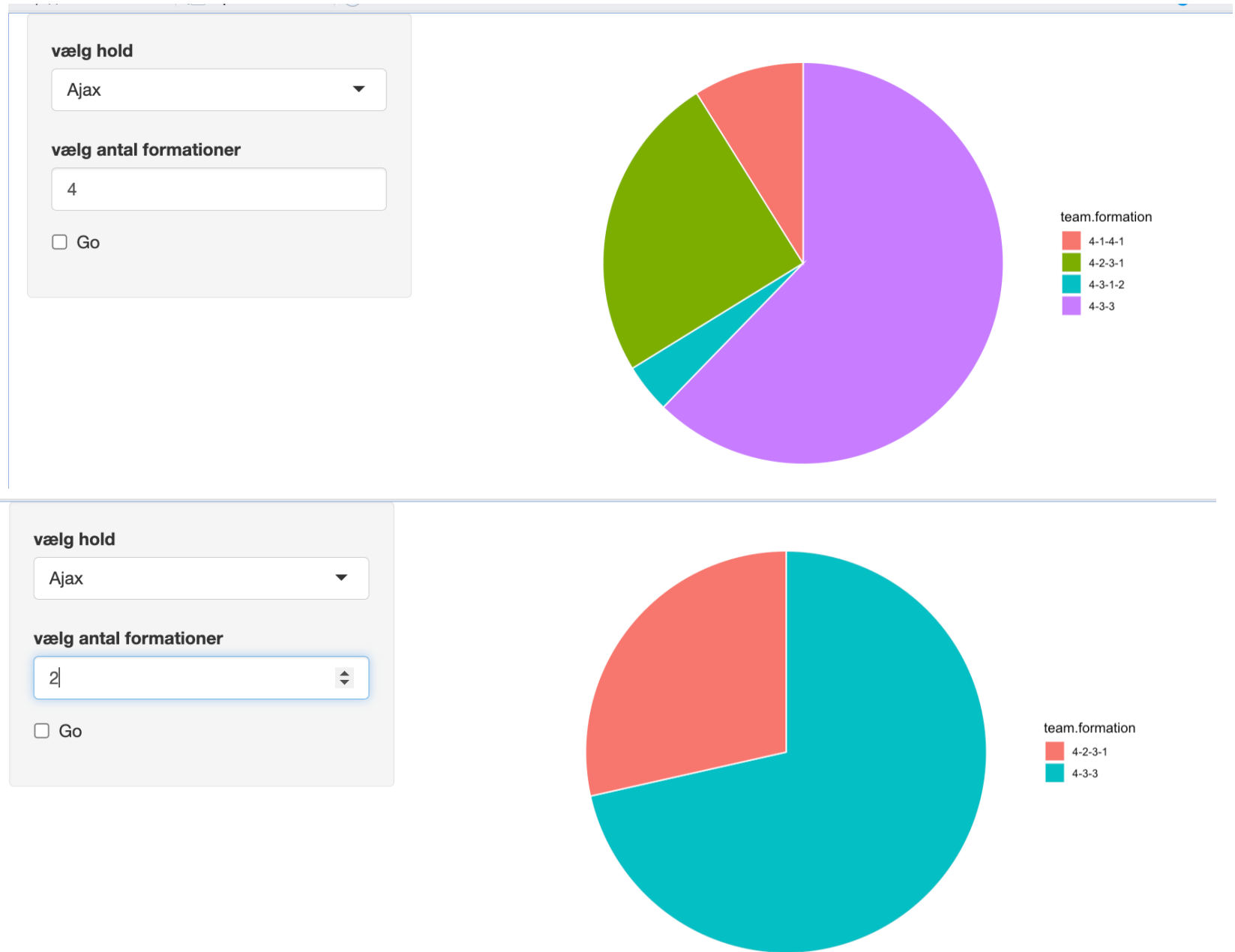


SHINY Øvelse

- Piechart på 20 minutter

Lav denne Shiny-app ud fra WyScout-data (uden Go-knap). den skal indeholde flg commits:

- 1) dataframe med formations-hyppighed opregnet pr team
- 2) ui-template
- 3) ui-elementern populere
- 4) server-output med ggplot



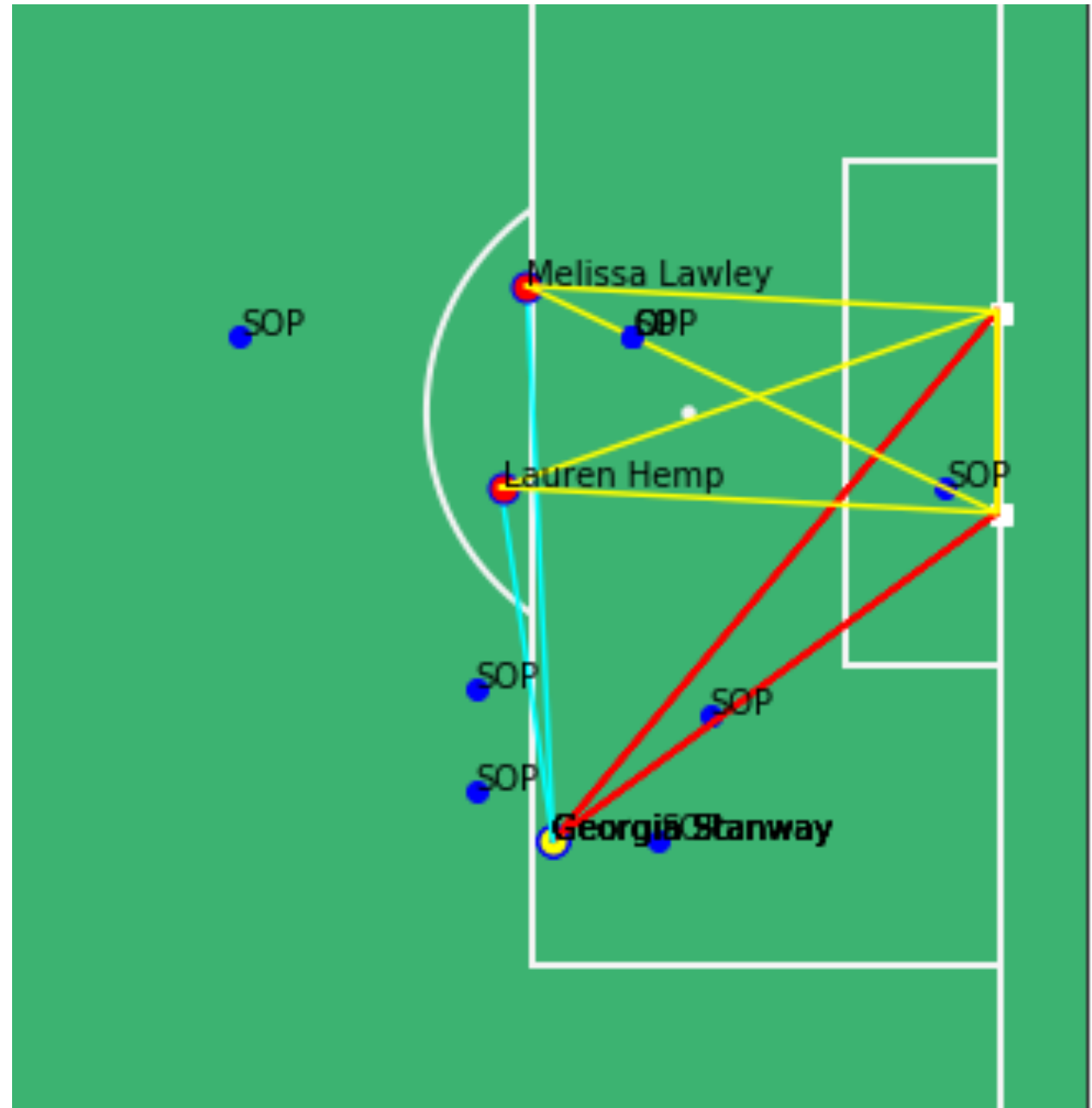
Kvinder & Fodbold Freeze-Frame

- Number of players in tri
- Distance of pass to teamplayer
- Distance to passline from opponent
- Teamplayer xG
 - Distance, angle

This frame:

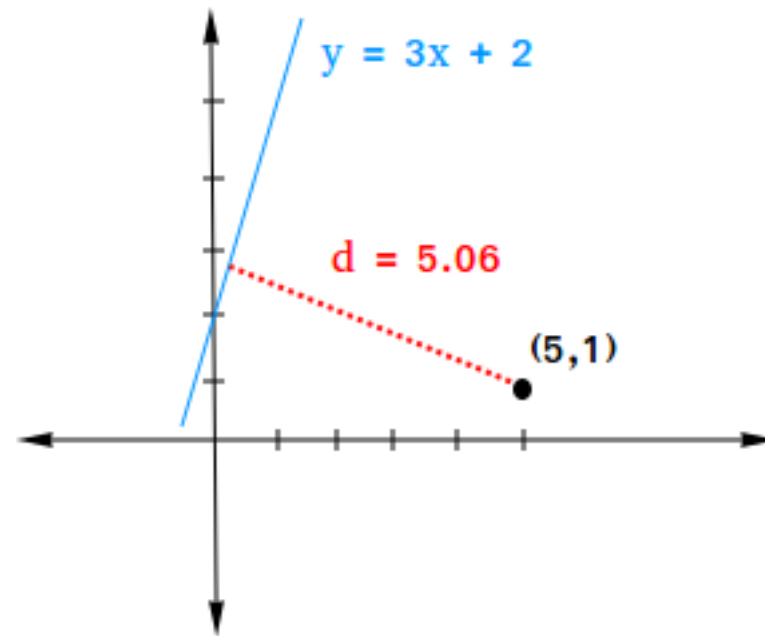
```
If for all team-others
    shooter tri < other tri
    AND
    Other gdist < (shooter + tol)
    AND
    Passdist Shooter-Other-ratio > 0.2
Then
    should have been a pass
```

Conclusion: Should have been a pass



Kvinder & Fodbold Freeze-Frame

- Distance to passline from opponent



If the problem is two-dimensional, the position of the points **a**, **b** and **c** can be defined by pairs of numbers which represent the points' **x** and the **y** coordinates. The following function can be used to calculate the distance **d** of the point **a** from the line defined by the two points **b** and **c** :

```
dist2d <- function(a,b,c) {  
  v1 <- b - c  
  v2 <- a - b  
  m <- cbind(v1,v2)  
  d <- abs(det(m))/sqrt(sum(v1*v1))  
}
```

Kvinder & Fodbold Freeze-Frame

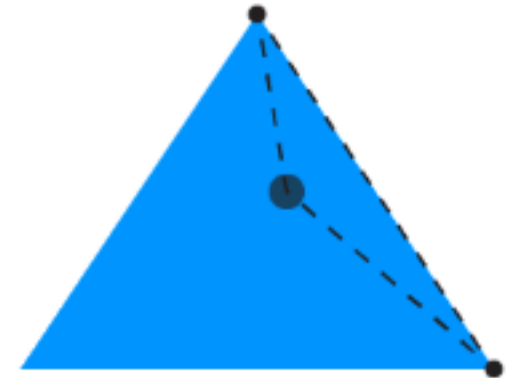
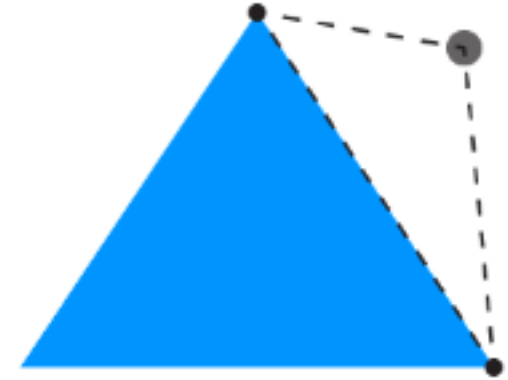
- Number of players in tri

To get the area, we use **Heron's Formula**:

```
float areaOrig = abs( (x2-x1)*(y3-y1) - (x3-x1)*(y2-y1) );
```

We need to calculate the area of the three triangles made from the point as well:

```
float area1 = abs( (x1-px)*(y2-py) - (x2-px)*(y1-py) );  
float area2 = abs( (x2-px)*(y3-py) - (x3-px)*(y2-py) );  
float area3 = abs( (x3-px)*(y1-py) - (x1-px)*(y3-py) );
```

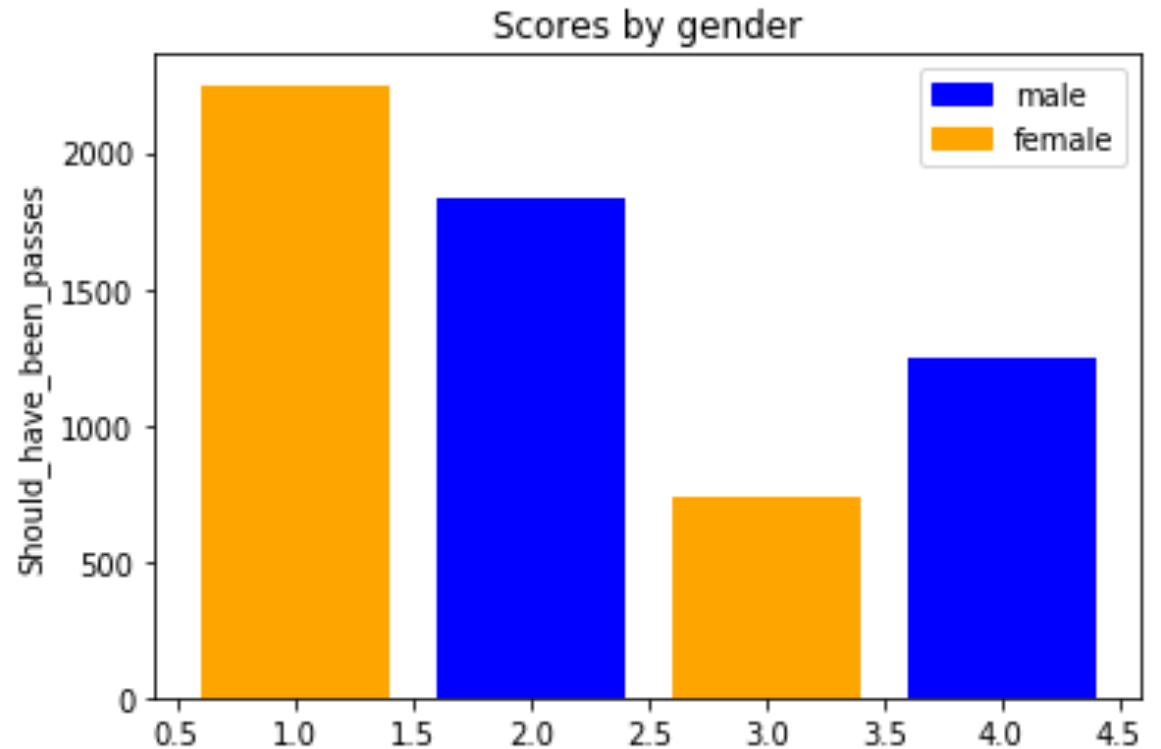


Kvinder & Fodbold



Bias ..


```
find({"type.name":"Shot", "gender":"female",  
"position.id" : {"$in":"striker_player}})
```


```
find({"type.name":"Shot", "gender":"male",  
"position.id" : {"$in":"def_player}})
```





Statsbomb


 Search or jump to... 


 [statsbomb / open-data](#) Public

 events


 lineups

 matches


 three-sixty

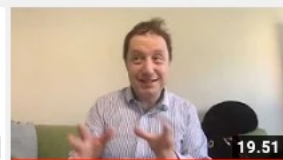
 competitions.json



Course: mathematical modelling of football  AFSPIL AI

This series of videos (combination of live videos and prerecorded) take in data in to Python, through plotting data, expected goals, evaluating

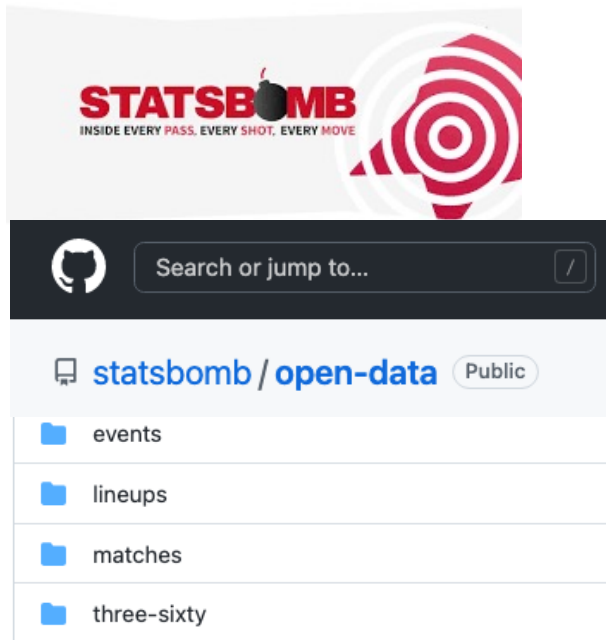

UPPSALA 48.54


19.51

Lecture 1: Mathematical Modelling of Football
Friends of Tracking
15.677 visninger •
Blev streamet for 1 år siden

Setting Up to do Data Science
Friends of Tracking
9.893 visninger • for 1 år siden

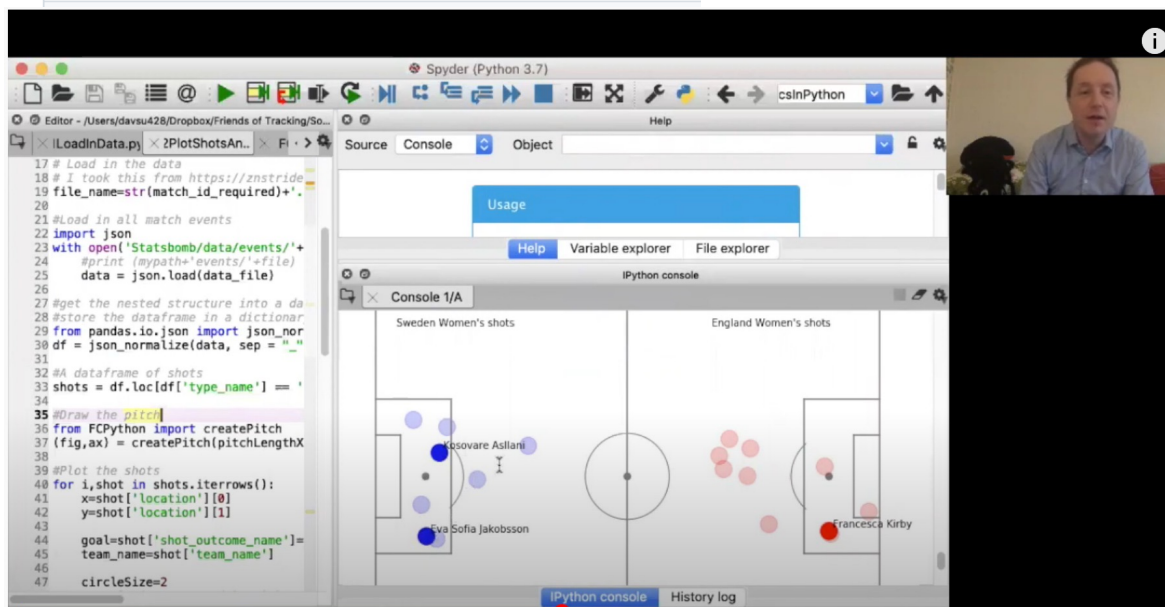
 [Friends-of-Tracking-Data-FoTD / SoccermaticsForPython](#) Public



Sample event from
69301.json with
3291 events

David laver

- 1) Shots map
- 2) Passes map



```

495 },
496   id : ecec23b8-f03d-4bee-80df-9fabec558187,
497   index : 9,
498   period : 1,
499   timestamp : 00:00:05.143,
500   minute : 0,
501   second : 5,
502   type : {
503     id : 30,
504     name : Pass
505   },
506   possession : 2,
507   possession_team : {
508     id : 865,
509     name : England Women's
510   },
511   play_pattern : {
512     id : 9,
513     name : From Kick Off
514   },
515   team : {
516     id : 865,
517     name : England Women's
518   },
519   player : {
520     id : 4641,
521     name : Francesca Kirby
522   },
523   position : {
524     id : 15,
525     name : Left Center Midfield
526   },
527   location : [ 82.6, 37.6 ],
528   duration : 1.173625,
529   related_events : [ ebb46045-f1ab-4c25-88b8-fc7ea165b52d ],
530   pass : {
531     recipient : {
532       id : 10178,
533       name : Lucy Bronze
534     },
535     length : 21.317833,
536     angle : 1.7691119,
537     height : {
538       id : 1,
539       name : Ground Pass
540     },
541     end_location : [ 78.4, 58.5 ],
542     body_part : {
543       id : 40,
544       name : Right Foot
545     }
546   }

```



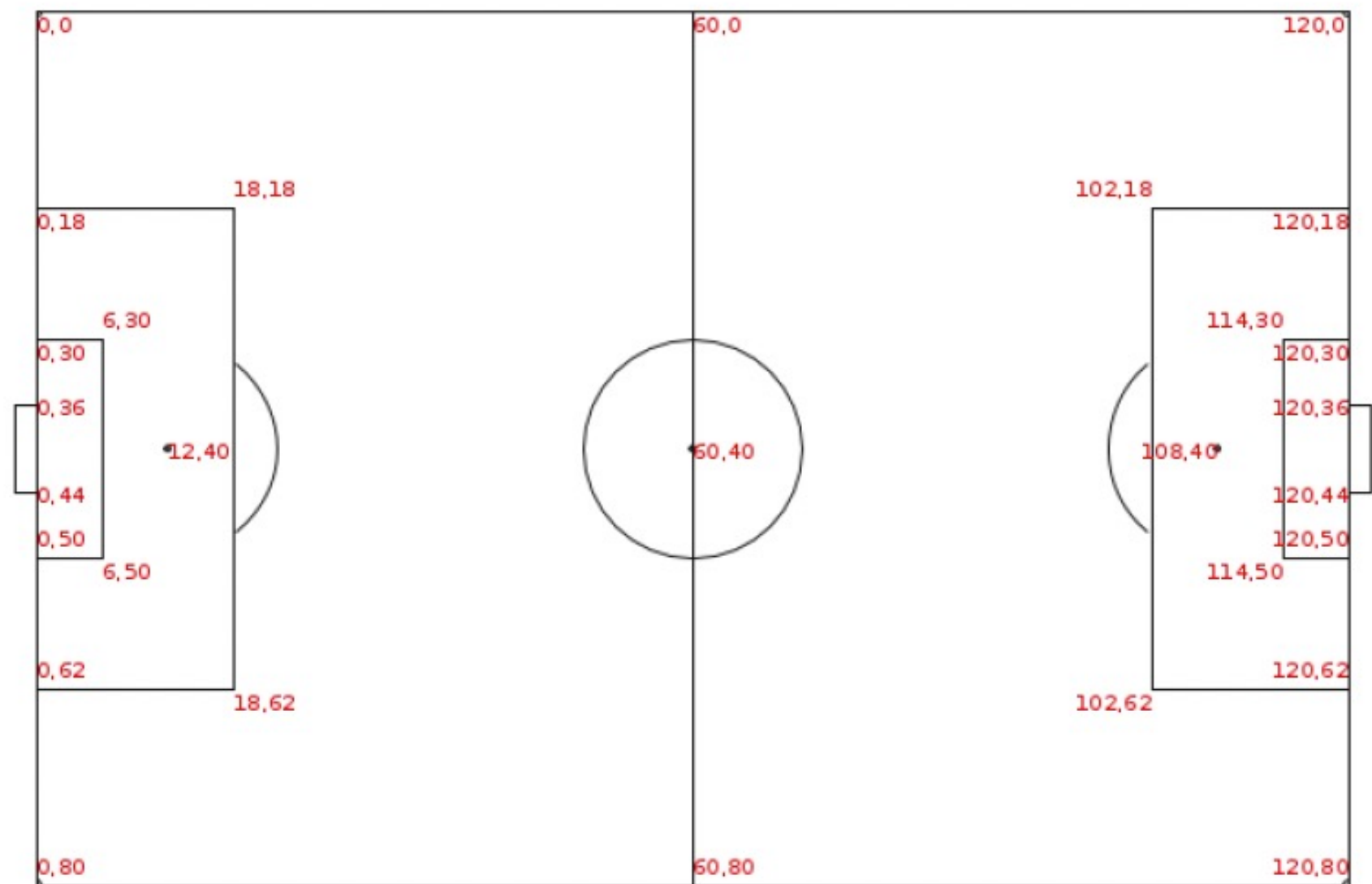
Search or jump to...



statsbomb / open-data

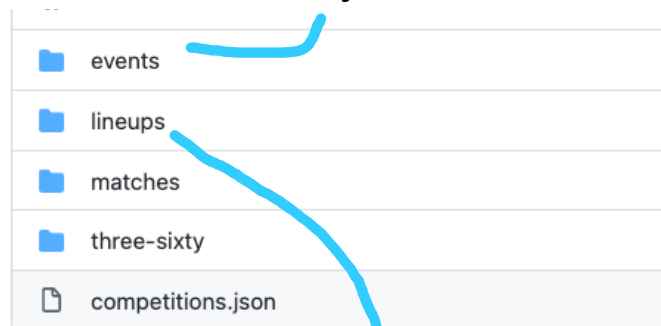
Public

- events
- lineups
- matches
- three-sixty
- competitions.json

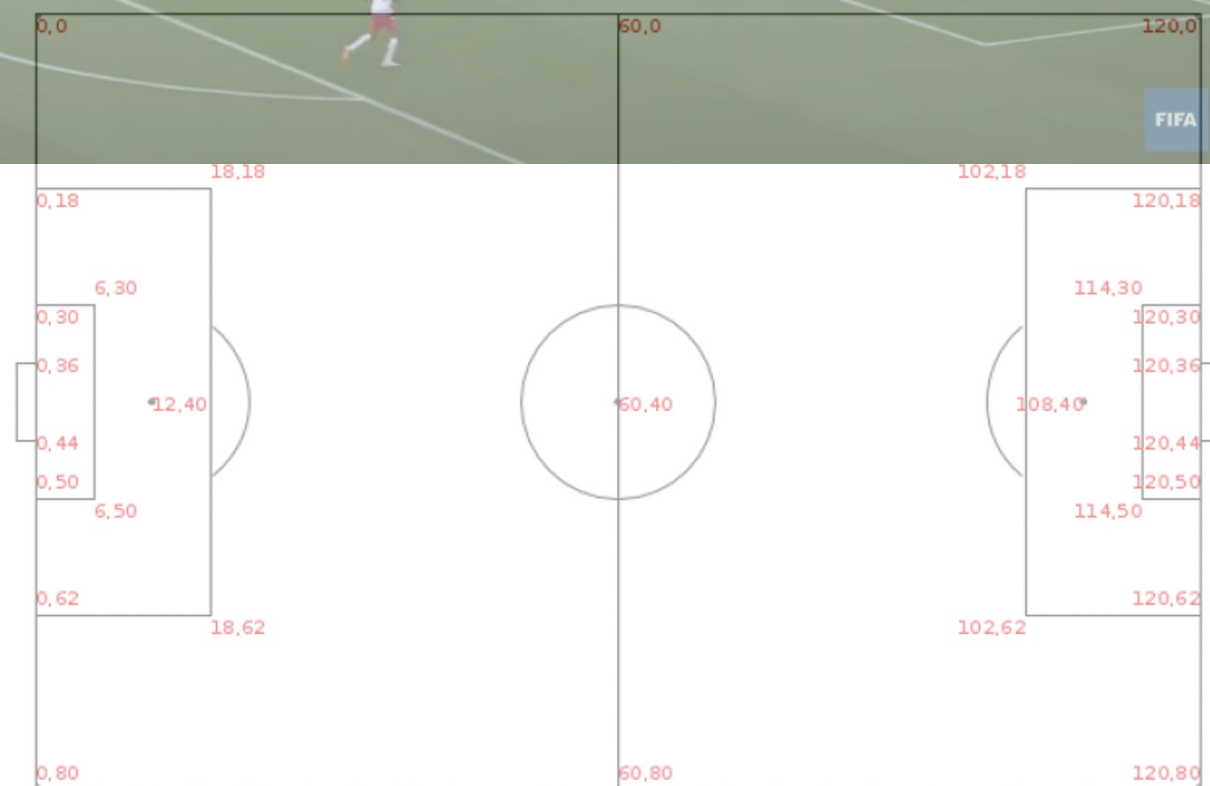
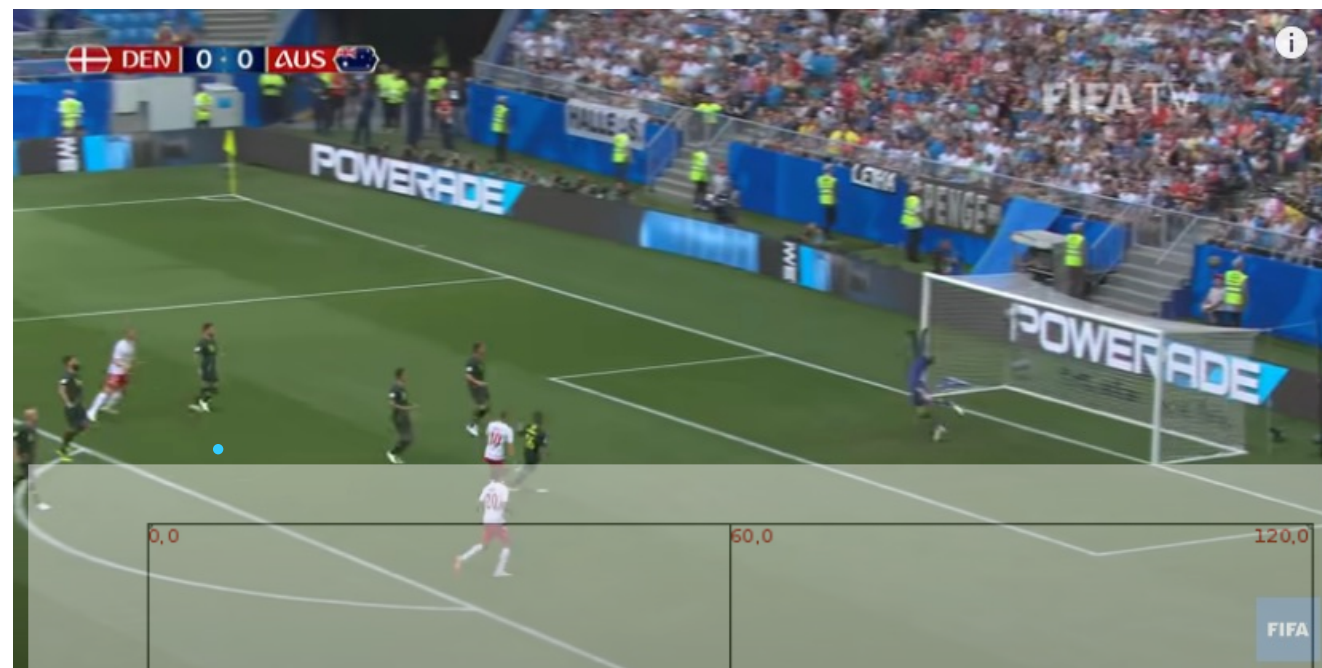




7547.json



7547.json

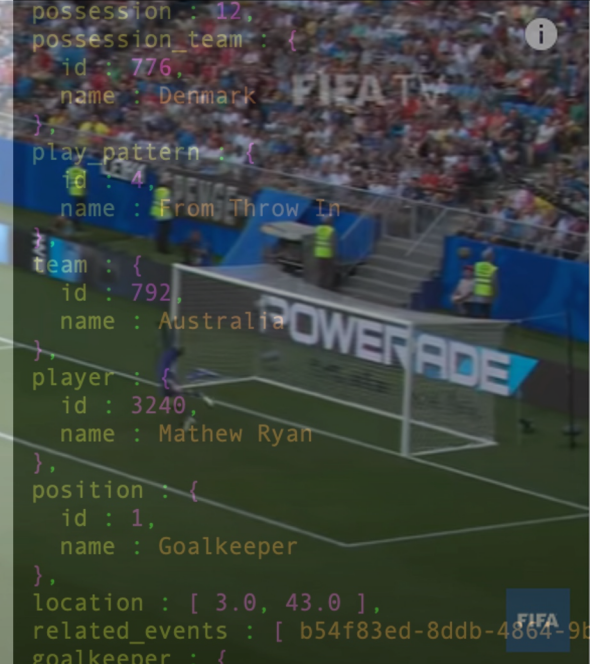


- events
- lineups
- matches
- three-sixty
- competitions

```
id : b54f83ed-8ddb-4864-9b0b-ccc1f4f95da0,
index : 214,
period : 1,
timestamp : 00:06:07.640,
minute : 6,
second : 7,
type : {
  id : 16,
  name : Shot
},
possession : 12,
possession_team : {
  id : 776,
  name : Denmark
},
play_pattern : {
  id : 4,
  name : From Throw In
},
team : {
  id : 776,
  name : Denmark
},
player : {
  id : 3043,
  name : Christian Dannemann Eriksen
},
position : {
  id : 19,
  name : Center Attacking Midfield
},
location : [ 104.0, 39.0 ],
duration : 0.6,
related_events : [ ef2b6ad0-caf8-47c8-b086-d252fc7834aa ],
shot : {
  statsbomb_xg : 0.20277502,
  end_location : [ 120.0, 37.8, 2.5 ],
  key_pass_id : 9eac306c-fadb-4bf3-bcc2-592e03882bd5,
  first_time : true,
  technique : {
    id : 93,
    name : Normal
  },
  type : {
    id : 87,
    name : Open Play
  },
  outcome : {
    id : 97,
    name : Goal
  },
  body_part : {
    id : 38,
    name : Left Foot
  },
}
```



```
{
  id : ef2b6ad0-caf8-47c8-b086-d252fc7834aa,
  index : 215,
  period : 1,
  timestamp : 00:06:08.240,
  minute : 6,
  second : 8,
  type : {
    id : 23,
    name : Goal Keeper
  },
  possession : 12,
  possession_team : {
    id : 776,
    name : Denmark
  },
  play_pattern : {
    id : 4,
    name : From Throw In
  },
  team : {
    id : 792,
    name : Australia
  },
  player : {
    id : 3240,
    name : Mathew Ryan
  },
  position : {
    id : 1,
    name : Goalkeeper
  },
  location : [ 3.0, 43.0 ],
  related_events : [ b54f83ed-8ddb-4864-9b0b-ccc1f4f95da0 ],
  goalkeeper : {
    technique : {
      id : 45,
      name : Diving
    },
    type : {
      id : 26,
      name : Goal Conceded
    },
    outcome : {
      id : 55,
      name : No Touch
    },
    position : {
      id : 44,
      name : Set
    },
  },
}
```

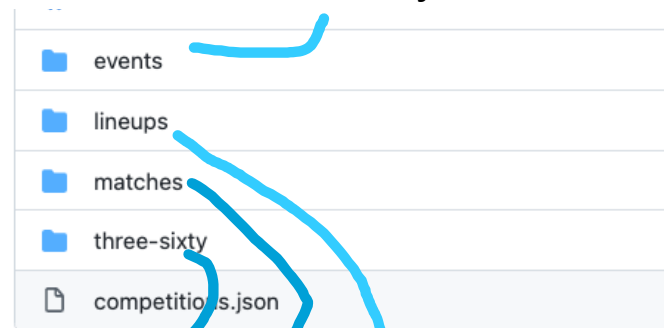




Three-sixty folderen rummer trackingdata for 51 kampe.
Desværre ikke for DK's kampe.
3788753 er Rusland vs Finland

```
{ {  
  "match_id" : 3788753,  
  match_date : 2021-06-16,  
  kick_off : 15:00:00.000,  
  competition : {  
    competition_id : 55,  
    country_name : Europe,  
    competition_name : UEFA Euro  
  },  
}
```

3788753.json har ca 3800 events



3788753.json opstillingen for de to hold

55/43.json has a record for matchid 3788753 (and 49 other games)

3788753.json has the tracking of that match



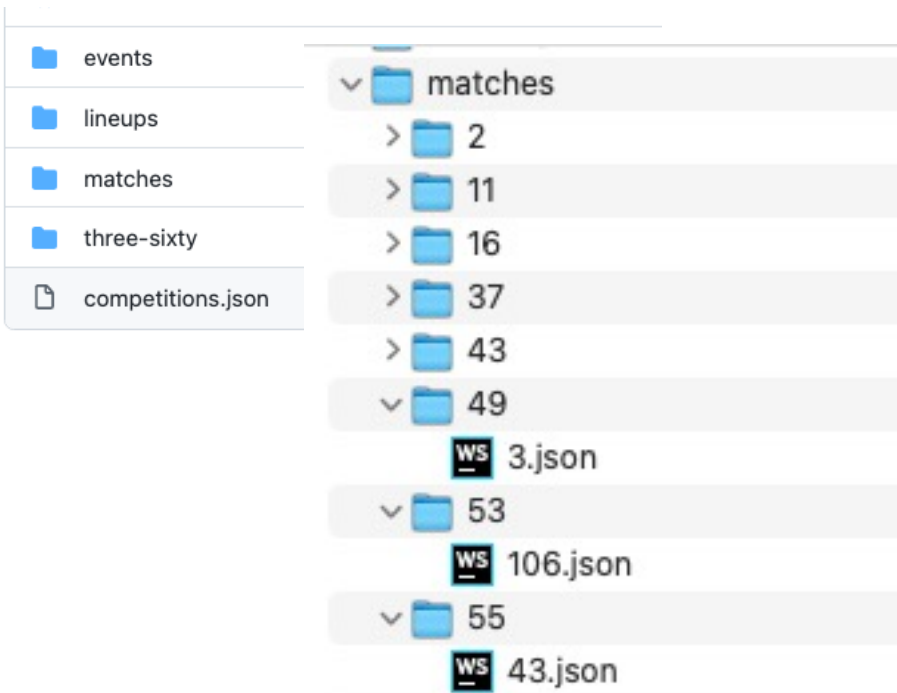
- events
- lineups
- matches
- three-sixty
- competitions.json

Lineups

```
[> jql '.[1].lineup[9]' 3788753.json
{
  "player_id": 15416,
  "player_name": "Jukka Raitala",
  "player_nickname": null,
  "jersey_number": 22,
  "country": {
    "id": 77,
    "name": "Finland"
  },
  "cards": [],
  "positions": [
    {
      "position_id": 7,
      "position": "Right Wing Back",
      "from": "00:00",
      "to": "74:26",
      "from_period": 1,
      "to_period": 2,
      "start_reason": "Starting XI",
      "end_reason": "Substitution - Off (Tactical)"
    }
  ]
}
```




Filen 43.json
med 51 kampe

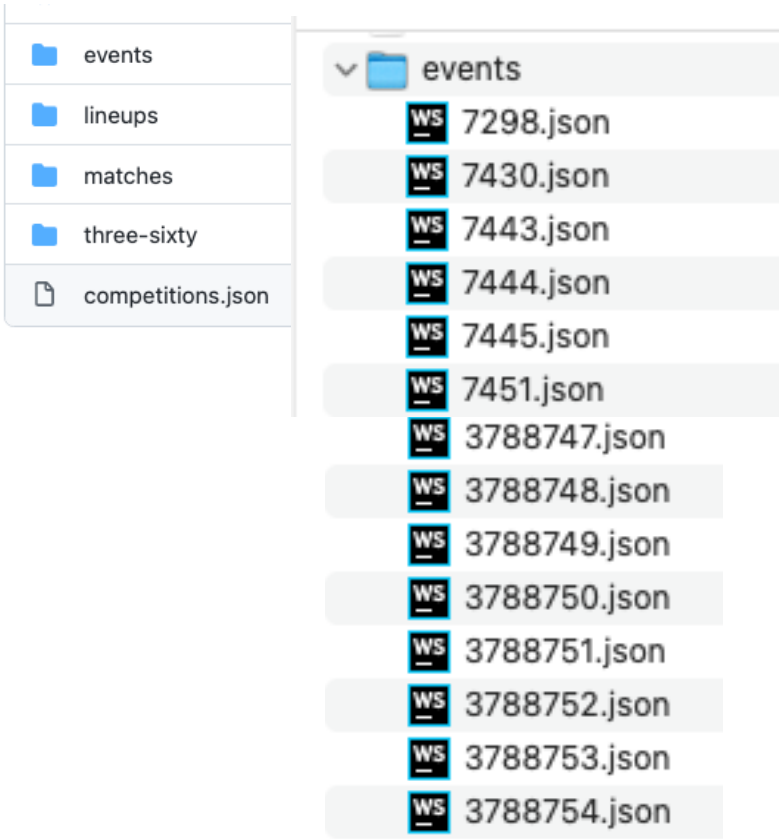


```

2295 }
2296 }, {
2297   match_id : 3788753,
2298   match_date : 2021-06-16,
2299   kick_off : 15:00:00.000,
2300   competition : {
2301     competition_id : 55,
2302     country_name : Europe,
2303     competition_name : UEFA Euro
2304   },
2305   season : {
2306     season_id : 43,
2307     season_name : 2020
2308   },
2309   home_team : {
2310     home_team_id : 1835,
2311     home_team_name : Finland,
2312     home_team_gender : male,
2313     home_team_group : Group B,
2314     country : {
2315       id : 77,
2316       name : Finland
2317     },
2318     managers : [ {
2319       id : 3622,
2320       name : Markku Kanerva,
2321       nickname : null,
2322       dob : 1964-05-24,
2323       country : {
2324         id : 77,
2325         name : Finland
2326       }
2327     } ]
2328   },
2329   away_team : {
2330     away_team_id : 796,
2331     away_team_name : Russia,
2332     away_team_gender : male,
2333     "away_team_group" : "Group B",
2334     country : {
2335       id : 160,
2336       name : Netherlands
2337     },
2338     match_week : 4,
2339     competition_stage : {
2340       id : 10,
2341       name : Group Stage
2342     },
2343     stadium : {
2344       id : 4726,
2345       name : Saint-Petersburg Stadium,
2346       country : {
2347         id : 188,
2348         name : Russia
2349       }
2350     },
2351     referee : {
2352       id : 293,
2353       name : Danny Desmond Makkellie,
2354       country : {
2355         id : 160,
2356         name : Netherlands
2357       }
2358     }
2359   }
2360 }, {
2361   match_id : 3788754,
2362   match_date : 2021-06-16,
2363   kick_off : 15:00:00.000,
2364   competition : {
2365     competition_id : 55,
2366     country_name : Europe,
2367     competition_name : UEFA Euro
2368   },
2369   season : {
2370     season_id : 43,
2371     season_name : 2020
2372   },
2373   home_team : {
2374     home_team_id : 1835,
2375     home_team_name : Finland,
2376     home_team_gender : male,
2377     home_team_group : Group B,
2378     country : {
2379       id : 77,
2380       name : Finland
2381     },
2382     managers : [ {
2383       id : 3622,
2384       name : Markku Kanerva,
2385       nickname : null,
2386       dob : 1964-05-24,
2387       country : {
2388         id : 77,
2389         name : Finland
2390       }
2391     } ]
2392   },
2393   away_team : {
2394     away_team_id : 796,
2395     away_team_name : Russia,
2396     away_team_gender : male,
2397     "away_team_group" : "Group B",
2398     country : {
2399       id : 160,
2400       name : Netherlands
2401     },
2402     match_week : 4,
2403     competition_stage : {
2404       id : 10,
2405       name : Group Stage
2406     },
2407     stadium : {
2408       id : 4726,
2409       name : Saint-Petersburg Stadium,
2410       country : {
2411         id : 188,
2412         name : Russia
2413       }
2414     },
2415     referee : {
2416       id : 293,
2417       name : Danny Desmond Makkellie,
2418       country : {
2419         id : 160,
2420         name : Netherlands
2421       }
2422     }
2423   }
2424 }, {
2425   match_id : 3788755,
2426   match_date : 2021-06-16,
2427   kick_off : 15:00:00.000,
2428   competition : {
2429     competition_id : 55,
2430     country_name : Europe,
2431     competition_name : UEFA Euro
2432   },
2433   season : {
2434     season_id : 43,
2435     season_name : 2020
2436   },
2437   home_team : {
2438     home_team_id : 1835,
2439     home_team_name : Finland,
2440     home_team_gender : male,
2441     home_team_group : Group B,
2442     country : {
2443       id : 77,
2444       name : Finland
2445     },
2446     managers : [ {
2447       id : 3622,
2448       name : Markku Kanerva,
2449       nickname : null,
2450       dob : 1964-05-24,
2451       country : {
2452         id : 77,
2453         name : Finland
2454       }
2455     } ]
2456   },
2457   away_team : {
2458     away_team_id : 796,
2459     away_team_name : Russia,
2460     away_team_gender : male,
2461     "away_team_group" : "Group B",
2462     country : {
2463       id : 160,
2464       name : Netherlands
2465     },
2466     match_week : 4,
2467     competition_stage : {
2468       id : 10,
2469       name : Group Stage
2470     },
2471     stadium : {
2472       id : 4726,
2473       name : Saint-Petersburg Stadium,
2474       country : {
2475         id : 188,
2476         name : Russia
2477       }
2478     },
2479     referee : {
2480       id : 293,
2481       name : Danny Desmond Makkellie,
2482       country : {
2483         id : 160,
2484         name : Netherlands
2485       }
2486     }
2487   }
2488 }, {
2489   match_id : 3788756,
2490   match_date : 2021-06-16,
2491   kick_off : 15:00:00.000,
2492   competition : {
2493     competition_id : 55,
2494     country_name : Europe,
2495     competition_name : UEFA Euro
2496   },
2497   season : {
2498     season_id : 43,
2499     season_name : 2020
2500   },
2501   home_team : {
2502     home_team_id : 1835,
2503     home_team_name : Finland,
2504     home_team_gender : male,
2505     home_team_group : Group B,
2506     country : {
2507       id : 77,
2508       name : Finland
2509     },
2510     managers : [ {
2511       id : 3622,
2512       name : Markku Kanerva,
2513       nickname : null,
2514       dob : 1964-05-24,
2515       country : {
2516         id : 77,
2517         name : Finland
2518       }
2519     } ]
2520   },
2521   away_team : {
2522     away_team_id : 796,
2523     away_team_name : Russia,
2524     away_team_gender : male,
2525     "away_team_group" : "Group B",
2526     country : {
2527       id : 160,
2528       name : Netherlands
2529     },
2530     match_week : 4,
2531     competition_stage : {
2532       id : 10,
2533       name : Group Stage
2534     },
2535     stadium : {
2536       id : 4726,
2537       name : Saint-Petersburg Stadium,
2538       country : {
2539         id : 188,
2540         name : Russia
2541       }
2542     },
2543     referee : {
2544       id : 293,
2545       name : Danny Desmond Makkellie,
2546       country : {
2547         id : 160,
2548         name : Netherlands
2549       }
2550     }
2551   }
2552 }, {
2553   match_id : 3788757,
2554   match_date : 2021-06-16,
2555   kick_off : 15:00:00.000,
2556   competition : {
2557     competition_id : 55,
2558     country_name : Europe,
2559     competition_name : UEFA Euro
2560   },
2561   season : {
2562     season_id : 43,
2563     season_name : 2020
2564   },
2565   home_team : {
2566     home_team_id : 1835,
2567     home_team_name : Finland,
2568     home_team_gender : male,
2569     home_team_group : Group B,
2570     country : {
2571       id : 77,
2572       name : Finland
2573     },
2574     managers : [ {
2575       id : 3622,
2576       name : Markku Kanerva,
2577       nickname : null,
2578       dob : 1964-05-24,
2579       country : {
2580         id : 77,
2581         name : Finland
2582       }
2583     } ]
2584   },
2585   away_team : {
2586     away_team_id : 796,
2587     away_team_name : Russia,
2588     away_team_gender : male,
2589     "away_team_group" : "Group B",
2590     country : {
2591       id : 160,
2592       name : Netherlands
2593     },
2594     match_week : 4,
2595     competition_stage : {
2596       id : 10,
2597       name : Group Stage
2598     },
2599     stadium : {
2600       id : 4726,
2601       name : Saint-Petersburg Stadium,
2602       country : {
2603         id : 188,
2604         name : Russia
2605       }
2606     },
2607     referee : {
2608       id : 293,
2609       name : Danny Desmond Makkellie,
2610       country : {
2611         id : 160,
2612         name : Netherlands
2613       }
2614     }
2615   }
2616 }, {
2617   match_id : 3788758,
2618   match_date : 2021-06-16,
2619   kick_off : 15:00:00.000,
2620   competition : {
2621     competition_id : 55,
2622     country_name : Europe,
2623     competition_name : UEFA Euro
2624   },
2625   season : {
2626     season_id : 43,
2627     season_name : 2020
2628   },
2629   home_team : {
2630     home_team_id : 1835,
2631     home_team_name : Finland,
2632     home_team_gender : male,
2633     home_team_group : Group B,
2634     country : {
2635       id : 77,
2636       name : Finland
2637     },
2638     managers : [ {
2639       id : 3622,
2640       name : Markku Kanerva,
2641       nickname : null,
2642       dob : 1964-05-24,
2643       country : {
2644         id : 77,
2645         name : Finland
2646       }
2647     } ]
2648   },
2649   away_team : {
2650     away_team_id : 796,
2651     away_team_name : Russia,
2652     away_team_gender : male,
2653     "away_team_group" : "Group B",
2654     country : {
2655       id : 160,
2656       name : Netherlands
2657     },
2658     match_week : 4,
2659     competition_stage : {
2660       id : 10,
2661       name : Group Stage
2662     },
2663     stadium : {
2664       id : 4726,
2665       name : Saint-Petersburg Stadium,
2666       country : {
2667         id : 188,
2668         name : Russia
2669       }
2670     },
2671     referee : {
2672       id : 293,
2673       name : Danny Desmond Makkellie,
2674       country : {
2675         id : 160,
2676         name : Netherlands
2677       }
2678     }
2679   }
2680 }, {
2681   match_id : 3788759,
2682   match_date : 2021-06-16,
2683   kick_off : 15:00:00.000,
2684   competition : {
2685     competition_id : 55,
2686     country_name : Europe,
2687     competition_name : UEFA Euro
2688   },
2689   season : {
2690     season_id : 43,
2691     season_name : 2020
2692   },
2693   home_team : {
2694     home_team_id : 1835,
2695     home_team_name : Finland,
2696     home_team_gender : male,
2697     home_team_group : Group B,
2698     country : {
2699       id : 77,
2700       name : Finland
2701     },
2702     managers : [ {
2703       id : 3622,
2704       name : Markku Kanerva,
2705       nickname : null,
2706       dob : 1964-05-24,
2707       country : {
2708         id : 77,
2709         name : Finland
2710       }
2711     } ]
2712   },
2713   away_team : {
2714     away_team_id : 796,
2715     away_team_name : Russia,
2716     away_team_gender : male,
2717     "away_team_group" : "Group B",
2718     country : {
2719       id : 160,
2720       name : Netherlands
2721     },
2722     match_week : 4,
2723     competition_stage : {
2724       id : 10,
2725       name : Group Stage
2726     },
2727     stadium : {
2728       id : 4726,
2729       name : Saint-Petersburg Stadium,
2730       country : {
2731         id : 188,
2732         name : Russia
2733       }
2734     },
2735     referee : {
2736       id : 293,
2737       name : Danny Desmond Makkellie,
2738       country : {
2739         id : 160,
2740         name : Netherlands
2741       }
2742     }
2743   }
2744 }, {
2745   match_id : 3788760,
2746   match_date : 2021-06-16,
2747   kick_off : 15:00:00.000,
2748   competition : {
2749     competition_id : 55,
2750     country_name : Europe,
2751     competition_name : UEFA Euro
2752   },
2753   season : {
2754     season_id : 43,
2755     season_name : 2020
2756   },
2757   home_team : {
2758     home_team_id : 1835,
2759     home_team_name : Finland,
2760     home_team_gender : male,
2761     home_team_group : Group B,
2762     country : {
2763       id : 77,
2764       name : Finland
2765     },
2766     managers : [ {
2767       id : 3622,
2768       name : Markku Kanerva,
2769       nickname : null,
2770       dob : 1964-05-24,
2771       country : {
2772         id : 77,
2773         name : Finland
2774       }
2775     } ]
2776   },
2777   away_team : {
2778     away_team_id : 796,
2779     away_team_name : Russia,
2780     away_team_gender : male,
2781     "away_team_group" : "Group B",
2782     country : {
2783       id : 160,
2784       name : Netherlands
2785     },
2786     match_week : 4,
2787     competition_stage : {
2788       id : 10,
2789       name : Group Stage
2790     },
2791     stadium : {
2792       id : 4726,
2793       name : Saint-Petersburg Stadium,
2794       country : {
2795         id : 188,
2796         name : Russia
2797       }
2798     },
2799     referee : {
2800       id : 293,
2801       name : Danny Desmond Makkellie,
2802       country : {
2803         id : 160,
2804         name : Netherlands
2805       }
2806     }
2807   }
2808 }, {
2809   match_id : 3788761,
2810   match_date : 2021-06-16,
2811   kick_off : 15:00:00.000,
2812   competition : {
2813     competition_id : 55,
2814     country_name : Europe,
2815     competition_name : UEFA Euro
2816   },
2817   season : {
2818     season_id : 43,
2819     season_name : 2020
2820   },
2821   home_team : {
2822     home_team_id : 1835,
2823     home_team_name : Finland,
2824     home_team_gender : male,
2825     home_team_group : Group B,
2826     country : {
2827       id : 77,
2828       name : Finland
2829     },
2830     managers : [ {
2831       id : 3622,
2832       name : Markku Kanerva,
2833       nickname : null,
2834       dob : 1964-05-24,
2835       country : {
2836         id : 77,
2837         name : Finland
2838       }
2839     } ]
2840   },
2841   away_team : {
2842     away_team_id : 796,
2843     away_team_name : Russia,
2844     away_team_gender : male,
2845     "away_team_group" : "Group B",
2846     country : {
2847       id : 160,
2848       name : Netherlands
2849     },
2850     match_week : 4,
2851     competition_stage : {
2852       id : 10,
2853       name : Group Stage
2854     },
2855     stadium : {
2856       id : 4726,
2857       name : Saint-Petersburg Stadium,
2858       country : {
2859         id : 188,
2860         name : Russia
2861       }
2862     },
2863     referee : {
2864       id : 293,
2865       name : Danny Desmond Makkellie,
2866       country : {
2867         id : 160,
2868         name : Netherlands
2869       }
2870     }
2871   }
2872 }, {
2873   match_id : 3788762,
2874   match_date : 2021-06-16,
2875   kick_off : 15:00:00.000,
2876   competition : {
2877     competition_id : 55,
2878     country_name : Europe,
2879     competition_name : UEFA Euro
2880   },
2881   season : {
2882     season_id : 43,
2883     season_name : 2020
2884   },
2885   home_team : {
2886     home_team_id : 1835,
2887     home_team_name : Finland,
2888     home_team_gender : male,
2889     home_team_group : Group B,
2890     country : {
2891       id : 77,
2892       name : Finland
2893     },
2894     managers : [ {
2895       id : 3622,
2896       name : Markku Kanerva,
2897       nickname : null,
2898       dob : 1964-05-24,
2899       country : {
2900         id : 77,
2901         name : Finland
2902       }
2903     } ]
2904   },
2905   away_team : {
2906     away_team_id : 796,
2907     away_team_name : Russia,
2908     away_team_gender : male,
2909     "away_team_group" : "Group B",
2910     country : {
2911       id : 160,
2912       name : Netherlands
2913     },
2914     match_week : 4,
2915     competition_stage : {
2916       id : 10,
2917       name : Group Stage
2918     },
2919     stadium : {
2920       id : 4726,
2921       name : Saint-Petersburg Stadium,
2922       country : {
2923         id : 188,
2924         name : Russia
2925       }
2926     },
2927     referee : {
2928       id : 293,
2929       name : Danny Desmond Makkellie,
2930       country : {
2931         id : 160,
2932         name : Netherlands
2933       }
2934     }
2935   }
2936 }, {
2937   match_id : 3788763,
2938   match_date : 2021-06-16,
2939   kick_off : 15:00:00.000,
2940   competition : {
2941     competition_id : 55,
2942     country_name : Europe,
2943     competition_name : UEFA Euro
2944   },
2945   season : {
2946     season_id : 43,
2947     season_name : 2020
2948   },
2949   home_team : {
2950     home_team_id : 1835,
2951     home_team_name : Finland,
2952     home_team_gender : male,
2953     home_team_group : Group B,
2954     country : {
2955       id : 77,
2956       name : Finland
2957     },
2958     managers : [ {
2959       id : 3622,
2960       name : Markku Kanerva,
2961       nickname : null,
2962       dob : 1964-05-24,
2963       country : {
2964         id : 77,
2965         name : Finland
2966       }
2967     } ]
2968   },
2969   away_team : {
2970     away_team_id : 796,
2971     away_team_name : Russia,
2972     away_team_gender : male,
2973     "away_team_group" : "Group B",
2974     country : {
2975       id : 160,
2976       name : Netherlands
2977     },
2978     match_week : 4,
2979     competition_stage : {
2980       id : 10,
2981       name : Group Stage
2982     },
2983     stadium : {
2984       id : 4726,
2985       name : Saint-Petersburg Stadium,
2986       country : {
2987         id : 188,
2988         name : Russia
2989       }
2990     },
2991     referee : {
2992       id : 293,
2993       name : Danny Desmond Makkellie,
2994       country : {
2995         id : 160,
2996         name : Netherlands
2997       }
2998     }
2999   }
3000 }, {
3001   match_id : 3788764,
3002   match_date : 2021-06-16,
3003   kick_off : 15:00:00.000,
3004   competition : {
3005     competition_id : 55,
3006     country_name : Europe,
3007     competition_name : UEFA Euro
3008   },
3009   season : {
3010     season_id : 43,
3011     season_name : 2020
3012   },
3013   home_team : {
3014     home_team_id : 1835,
3015     home_team_name : Finland,
3016     home_team_gender : male,
3017     home_team_group : Group B,
3018     country : {
3019       id : 77,
3020       name : Finland
3021     },
3022     managers : [ {
3023       id : 3622,
3024       name : Markku Kanerva,
3025       nickname : null,
3026       dob : 1964-05-24,
3027       country : {
3028         id : 77,
3029         name : Finland
3030       }
3031     } ]
3032   },
3033   away_team : {
3034     away_team_id : 796,
3035     away_team_name : Russia,
3036     away_team_gender : male,
3037     "away_team_group" : "Group B",
3038     country : {
3039       id : 160,
3040       name : Netherlands
3041     },
3042     match_week : 4,
3043     competition_stage : {
3044       id : 10,
3045       name : Group Stage
3046     },
3047     stadium : {
3048       id : 4726,
3049       name : Saint-Petersburg Stadium,
3050       country : {
3051         id : 188,
3052         name : Russia
3053       }
3054     },
3055     referee : {
3056       id : 293,
3057       name : Danny Desmond Makkellie,
3058       country : {
3059         id : 160,
3060         name : Netherlands
3061       }
3062     }
3063   }
3064 }, {
3065   match_id : 3788765,
3066   match_date : 2021-06-16,
3067   kick_off : 15:00:00.000,
3068   competition : {
3069     competition_id : 55,
3070     country_name : Europe,
3071     competition_name : UEFA Euro
3072   },
3073   season : {
3074     season_id : 43,
3075     season_name : 2020
3076   },
3077   home_team : {
3078     home_team_id : 1835,
3079     home_team_name : Finland,
3080     home_team_gender : male,
3081     home_team_group : Group B,
3082     country : {
3083       id : 77,
3084       name : Finland
3085     },
3086     managers : [ {
3087       id : 3622,
3088       name : Markku Kanerva,
3089       nickname : null,
3090       dob : 1964-05-24,
3091       country : {
3092         id : 77,
3093         name : Finland
3094       }
3095     } ]
3096   },
3097   away_team : {
3098     away_team_id : 796,
3099     away_team_name : Russia,
3100     away_team_gender : male,
3101     "away_team_group" : "Group B",
3102     country : {
3103       id : 160,
3104       name : Netherlands
3105     },
3106     match_week : 4,
3107     competition_stage : {
3108       id : 10,
3109       name : Group Stage
3110     },
3111     stadium : {
3112       id : 4726,
3113       name : Saint-Petersburg Stadium,
3114       country : {
3115         id : 188,
3116         name : Russia
3117       }
3118     },
3119     referee : {
3120       id : 293,
3121       name : Danny Desmond Makkellie,
3122       country : {
3123         id : 160,
3124         name : Netherlands
3125       }
3126     }
3127   }
3128 }, {
3129   match_id : 3788766,
3130   match_date : 2021-06-16,
3131   kick_off : 15:00:00.000,
3132   competition : {
3133     competition_id : 55,
3134     country_name : Europe,
3135     competition_name : UEFA Euro
3136   },
3137   season : {
3138     season_id : 43,
3139     season_name : 2020
3140   },
3141   home_team : {
3142     home_team_id : 1835,
3143     home_team_name : Finland,
3144     home_team_gender : male,
3145     home_team_group : Group B,
3146     country : {
3147       id : 77,
3148       name : Finland
3149     },
3150     managers : [ {
3151       id : 3622,
3152       name : Markku Kanerva,
3153       nickname : null,
3154       dob : 1964-05-24,
3155       country : {
3156         id : 77,
3157         name : Finland
3158       }
3159     } ]
3160   },
3161   away_team : {
3162     away_team_id : 796,
3163     away_team_name : Russia,
3164     away_team_gender : male,
3165     "away_team_group" : "Group B",
3166     country : {
3167       id : 160,
3168       name : Netherlands
3169     },
3170     match_week : 4,
3171     competition_stage : {
3172       id : 10,
3173       name : Group Stage
3174     },
3175     stadium : {
3176       id : 4726,
3177       name : Saint-Petersburg Stadium,
3178       country : {
3179         id : 188,
3180         name : Russia
3181       }
3182     },
3183     referee : {
3184       id : 293,
3185       name : Danny Desmond Makkellie,
3186       country : {
3187         id : 160,
3188         name : Netherlands
3189       }
3190     }
3191   }
3192 }, {
3193   match_id : 3788767,
3194   match_date : 2021-06-16,
3195   kick_off : 15:00:00.000,
3196   competition : {
3197     competition_id : 55,
3198     country_name : Europe,
3199     competition_name : UEFA Euro
3200   },
3201   season : {
3202     season_id : 43,
3203     season_name : 2020
3204   },
3205   home_team : {
3206     home_team_id : 1835,
3207     home_team_name : Finland,
3208     home_team_gender : male,
3209     home_team_group : Group B,
3210     country : {
3211       id : 77,
3212       name : Finland
3213     },
3214     managers : [ {
3215       id : 3622,
3216       name : Markku Kanerva,
3217       nickname : null,
3218       dob : 1964-05-24,
3219       country : {
3220         id : 77,
3221         name : Finland
3222       }
3223     } ]
3224   },
3225   away_team : {
3226     away_team_id : 796,
3227     away_team_name : Russia,
3228     away_team_gender : male,
3229     "away_team_group" : "Group B",
3230     country : {
3231       id : 160,
3232       name : Netherlands
3233     },
3234     match_week : 4,
3235     competition_stage : {
3236       id : 10,
3237       name : Group Stage
3238     },
3239     stadium : {
3240       id : 4726,
3241       name : Saint-Petersburg Stadium,
3242       country : {
3243         id : 188,
3244         name : Russia
3245       }
3246     },
3247     referee : {
3248       id : 293,
3249       name : Danny Desmond Makkellie,
3250       country : {
3251         id : 160,
3252         name : Netherlands
3253       }
3254     }
3255   }
3256 }, {
3257   match_id : 3788768,
3258   match_date : 2021-06-16,
3259   kick_off : 15:00:00.000,
3260   competition : {
3261     competition_id : 55,
3262     country_name : Europe,
3263     competition_name : UEFA Euro
3264   },
3265   season : {
3266     season_id : 43,
3267     season_name : 2020
3268   },
3269   home_team : {
3270     home_team_id : 1835,
3271     home_team_name : Finland,
3272     home_team_gender : male,
3273     home_team_group : Group B,
3274     country : {
3275       id : 77,
3276       name : Finland
3277     },
3278     managers : [ {
3279       id : 3622,
3280       name : Markku Kanerva,
3281       nickname : null,
3282       dob : 1964-05-24,
3283       country : {
3284         id : 77,
3285         name : Finland
3286       }
3287     } ]
3288   },
3289   away_team : {
3290     away_team_id : 796,
3291     away_team_name : Russia,
3292     away_team_gender : male,
3293     "away_team_group" : "Group B",
3294     country : {
3295       id : 160,
3296       name : Netherlands
3297     },
3298     match_week : 4,
3299     competition_stage : {
3300       id : 10,
3301       name : Group Stage
3302     },
3303     stadium : {
3304       id : 4726,
3305       name : Saint-Petersburg Stadium,
3306       country : {
3307         id : 188,
3308         name : Russia
3309       }
3310     },
3311     referee : {
3312       id : 293,
3313       name : Danny Desmond Makkellie,
3314       country : {
3315         id : 160,
3316         name : Netherlands
3317       }
3318     }
3319   }
3320 }, {
3321   match_id : 3788769,
3322   match_date : 2021-06-16,
3323   kick_off : 15:00:00.000,
3324   competition : {
3325     competition_id : 55,
3326     country_name : Europe,
3327     competition_name : UEFA Euro
3328   },
3329   season : {
3330     season_id : 43,
3331     season_name : 2020
3332   },
3333   home_team : {
3334     home_team_id : 1835,
3335     home_team_name : Finland,
3336     home_team_gender : male,
3337     home_team_group : Group B,
3338     country : {
3339       id : 77,
3340       name : Finland
3341     },
3342     managers : [ {
3343       id : 3622,
3344       name : Markku Kanerva,
3345       nickname : null,
3346       dob : 1964-05-24,
3347       country : {
3348         id : 77,
3349         name : Finland
3350       }
3351     } ]
3352   },
3353   away_team : {
3354     away_team_id : 796,
3355     away_team_name : Russia,
3356     away_team_gender : male,
3357     "away_team_group" : "Group B",
3358     country : {
3359       id : 160,
3360       name : Netherlands
3361     },
3362     match_week : 4,
3363     competition_stage : {
3364       id : 10,
3365       name : Group Stage
3366     },
3367     stadium : {
3368       id : 4726,
3369       name : Saint-Petersburg Stadium,
3370       country : {
3371         id : 188,
3372         name : Russia
3373       }
3374     },
3375     referee : {
3376       id : 293,
3377       name : Danny Desmond Makkellie,
3378       country : {
3379         id : 160,
3380         name : Netherlands
3381       }
3382     }
3383   }
3384 }, {
3385   match_id : 3788770,
3386   match_date : 2021-06-16,
3387   kick_off
```



3788753.json indeholder 3806 events for kampen Rusland – Finland.



```

1 "Tactical Shift"
2 "50/50"
2 "Referee Ball-Drop"
2 "Starting XI"
3 "Player Off"
3 "Player On"
4 "Half End"
4 "Half Start"
8 "Substitution"
14 "Injury Stoppage"
19 "Dispossessed"
20 "Dribbled Past"
25 "Shot"
26 "Interception"
26 "Miscontrol"
27 "Foul Won"
28 "Foul Committed"
28 "Goal Keeper"
34 "Block"
34 "Dribble"
67 "Clearance"
86 "Duel"
108 "Ball Recovery"
355 "Pressure"
841 "Carry"
1001 "Ball Receipt*"
1038 "Pass"

```



3788753.json – eksempel på skud-event.

- events
- lineups
- matches
- three-sixty
- competitions.json

events

- 7298.json
- 7430.json
- 7443.json
- 7444.json
- 7445.json
- 7451.json
- 3788747.json
- 3788748.json
- 3788749.json
- 3788750.json
- 3788751.json
- 3788752.json
- 3788753.json
- 3788754.json

```

864 {
865   {
866     id: 1ce72d1b-a7c5-4eb
867     index: 865,
868     period: 1,
869     timestamp: 00:20:38.7
870     minute: 20,
871     second: 38,
872     type: {
873       id: 16,
874       name: Shot
875     },
876     possession: 38,
877     possession_team: {
878       id: 1835,
879       name: Finland
880     },
881     play_pattern: {
882       id: 2,
883       name: From Corner
884     },
885     team: {
886       id: 1835,
887       name: Finland
888     },
889     player: {
890       id: 26939,
891       name: Joona Toivio
892     },
907     shot: {
908       statsbomb_xg: 0.014892562,
909       end_location: [
910         120,
911         30.9,
912         5.9
913       ],
914       key_pass_id: e8a6376e-ba9d-49d
915       body_part: {
916         id: 37,
917         name: Head
918       },
919       type: {
920         id: 87,
921         name: Open
922       },
923       aerial_won: 1,
924       technique: {
925         id: 93,
926         name: Normal
927       },
928       outcome: {
929         id: 98,
930         name: Off Target
931       },
932       freeze_frame: {
933         location: [
934           112.7,
935           42
936         ],
937         {
1158       location: [
1159         111.7,
1160         36.2
1161       ],
1162       player: {
1163         id: 38196,
1164         name: Daniel O'Shaughnessy
1165       },
1166       position: {
1167         id: 5,
1168         name: Left Center Back
1169       },
1170       teammate: true
1171     }
1172   }
1173 }
1174 }
1175 {
1176   id: 7aa54ce6-106a-4e26-9fb1-77aa0d7

```