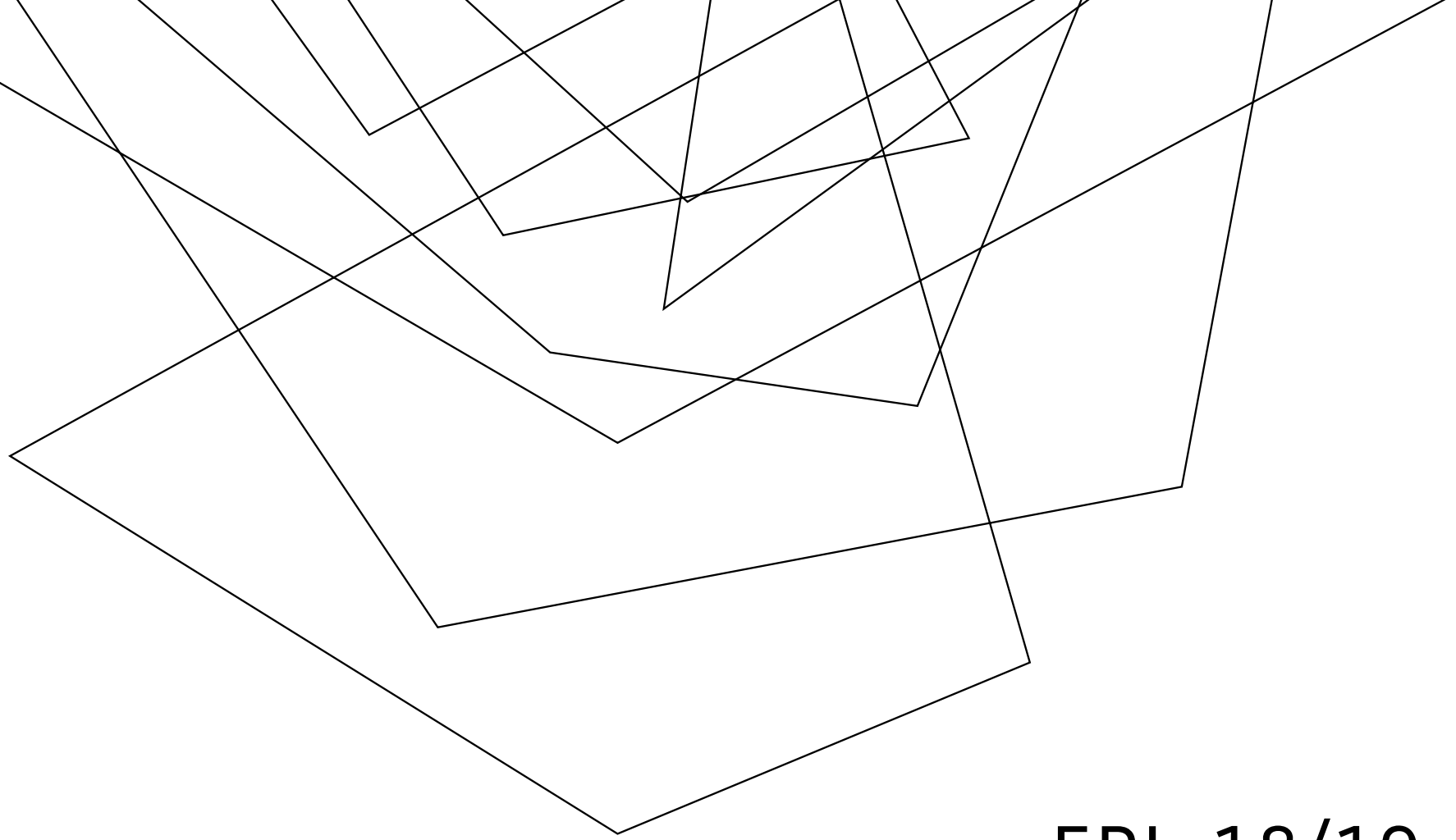


EPL 18/19

EXPLORATORY DATA ANALYSIS

By Ghazali Akmal Rabbani

OUTLINE

Data Preprocessing

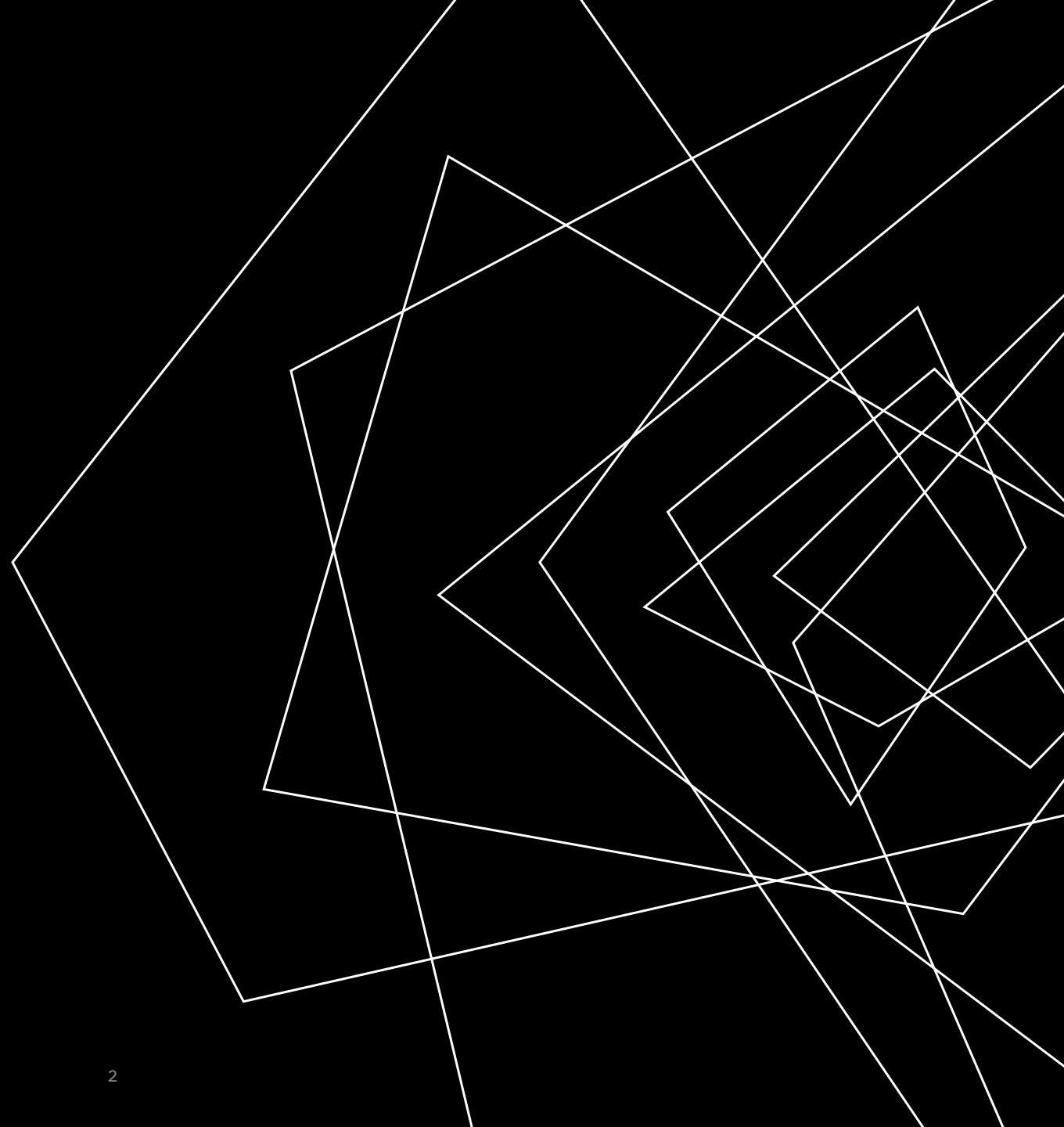
Points Distribution and Anomaly

Team Best Attack

Team Best Defence

Team Good Financial Aspect

More Insight



IS THE DATA CLEAN ?

1. Check Null Value
2. Check Type of Column
3. Convert Type of Column
4. Re-check Type of Column and Data Value

DATA PREPROCESSING

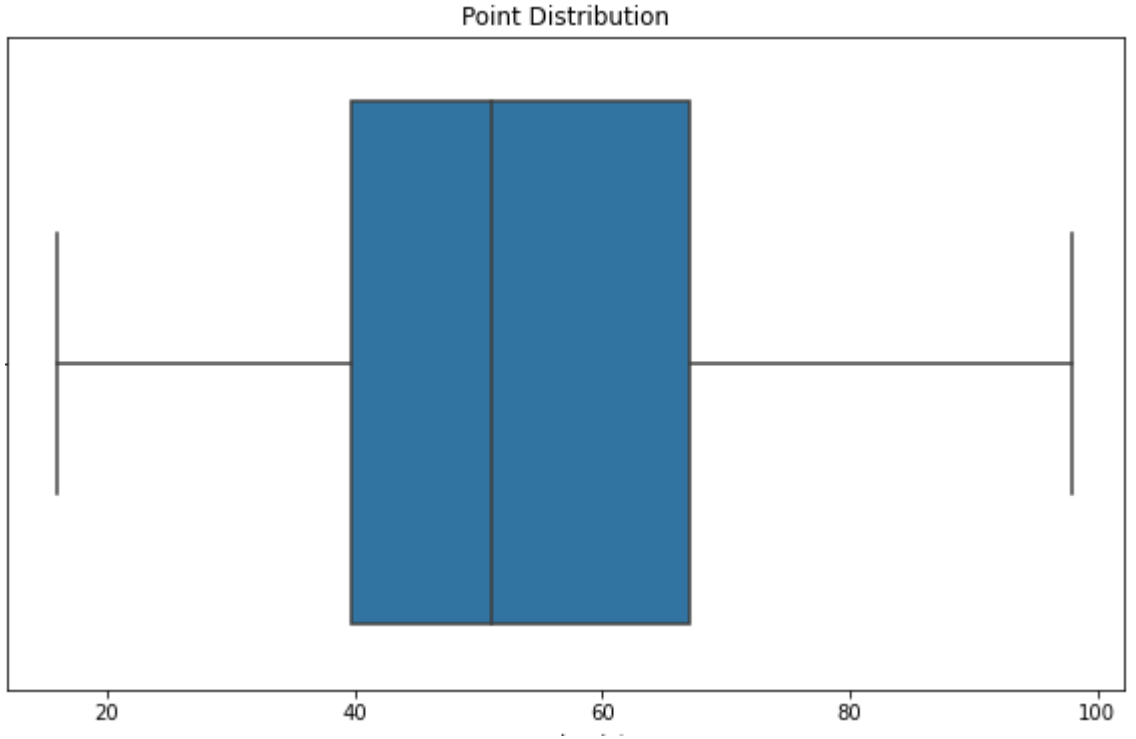
RECHECK TYPE COLUMN AND DATA VALUE

BEFORE AND AFTER CONVERT DATA TYPE

	TypeColumn Before	DataValue Before	TypeColumn After	CATEGORY 4
attack_passes	Object	26,581	int64	26581
attack_passes_long	Object	1,814	int64	1814
attack_passes_back	Object	4,240	int64	4240
defence_clearances	Object	1,120	int64	1120

DATA THAT SHOWN IN ABOVE IS ONE OF DATA IN DATASET

POINT DISTRIBUTION AND ANOMALY




```
==================================
Statistical Data Summary
==================================
Mean :  53.45
Median :  51.0
1st Quartile :  39.75
3rd Quartile :  67.0
IQR :  27.25
Upper Fence :  107.875
Lower Fence :  -1.125
==================================
```

```
==================================
Outliers Data Detection
==================================
Upper Outliers Data :  []
Upper Outliers Status :  False
Lower Outliers Data :  []
Lower Outliers Status :  False
==================================
```

WHICH TEAM IS ANOMALY ?

Based on the result in Boxplot in the above, **there is no team which considered as anomaly team** based on point distribution.

Because there is no outliers in point distribution which visualized by boxplot in above.

WHICH TEAM HAS THE BEST ATTACK ?

I used data which considered or similar as attack data and calculate the average of attack data of each team. After that, I find the max point of average attack data from all team

By that calculation, I found that Team with the Best Attack is **Manchester City with 2235.375 Point in Average Attack Data**

WHICH TEAM HAS THE BEST DEFENCE ?

I used data which considered or similar as defense data and calculate the average of defense data of each team. After that, I find the max point of average defense data from all team

By that calculation, I found that Team with the Best Defense is **Newcastle with 448.142857 Point in Average Defense Data**

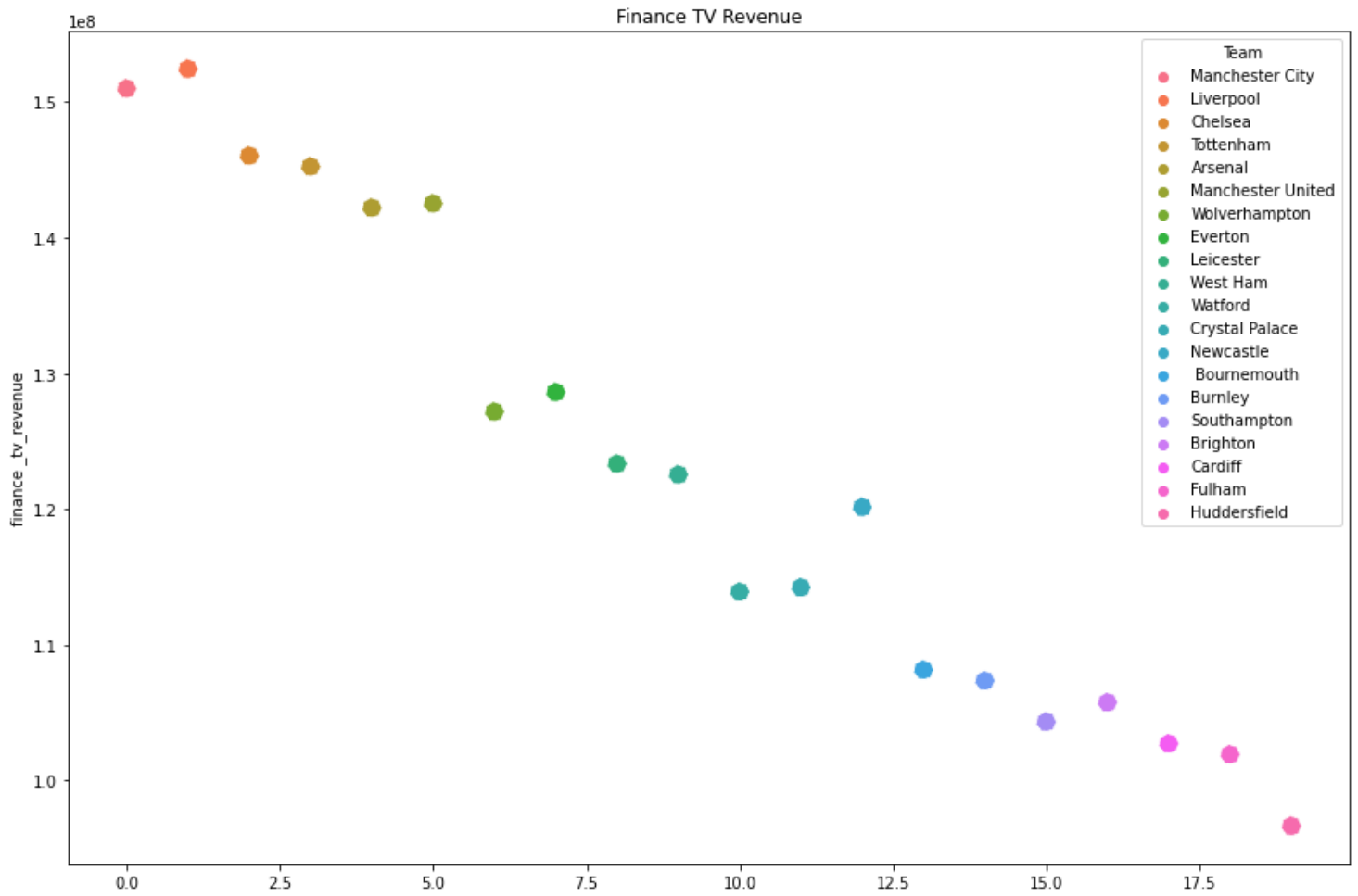
TEAM IN GOOD FINANCIAL ASPECT

1 Based on Finance TV Revenue

2 Based on Finance Team Market

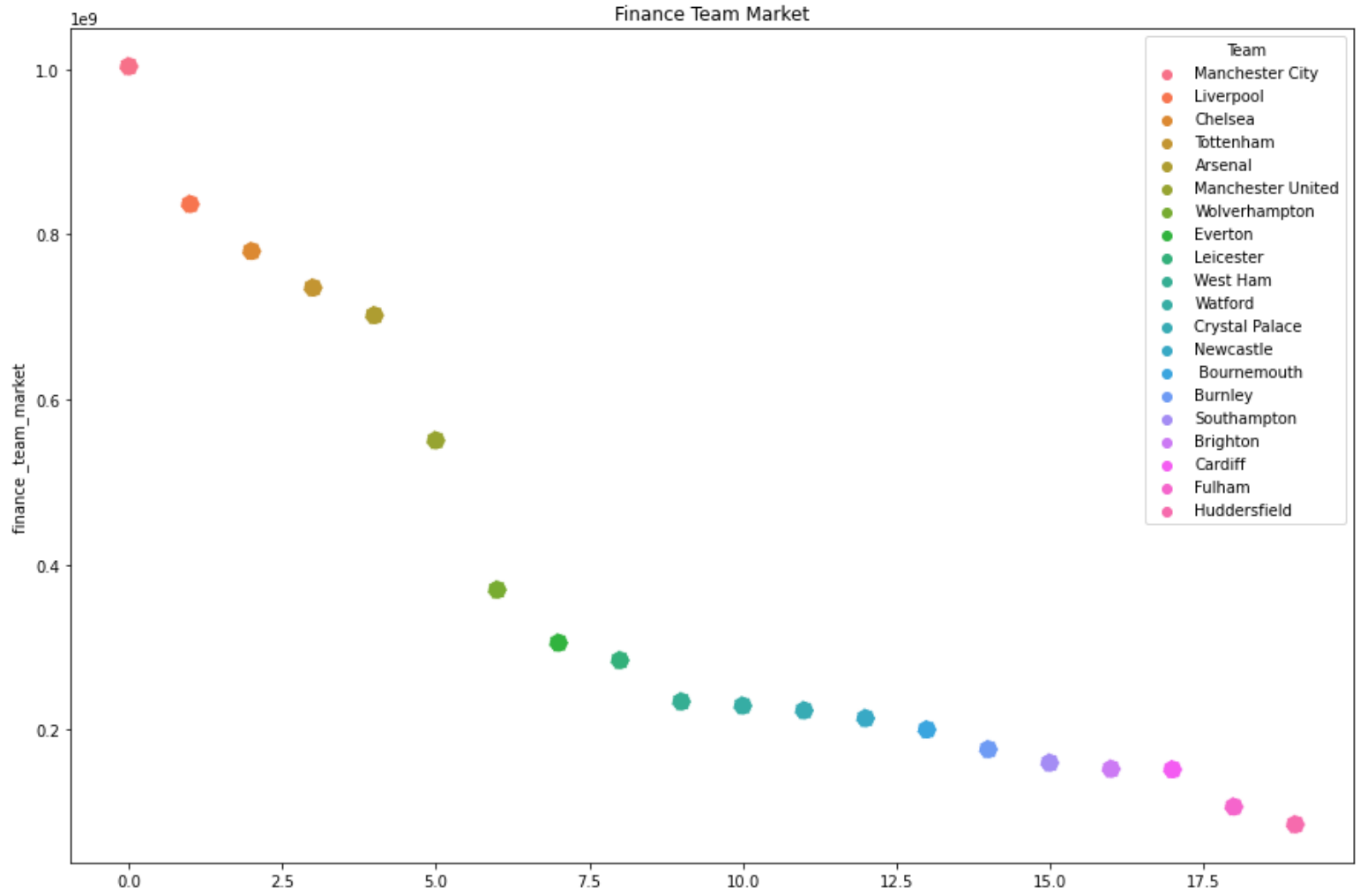
3 Based on Finance Market Average

GOOD ON FINANCE TV REVENUE



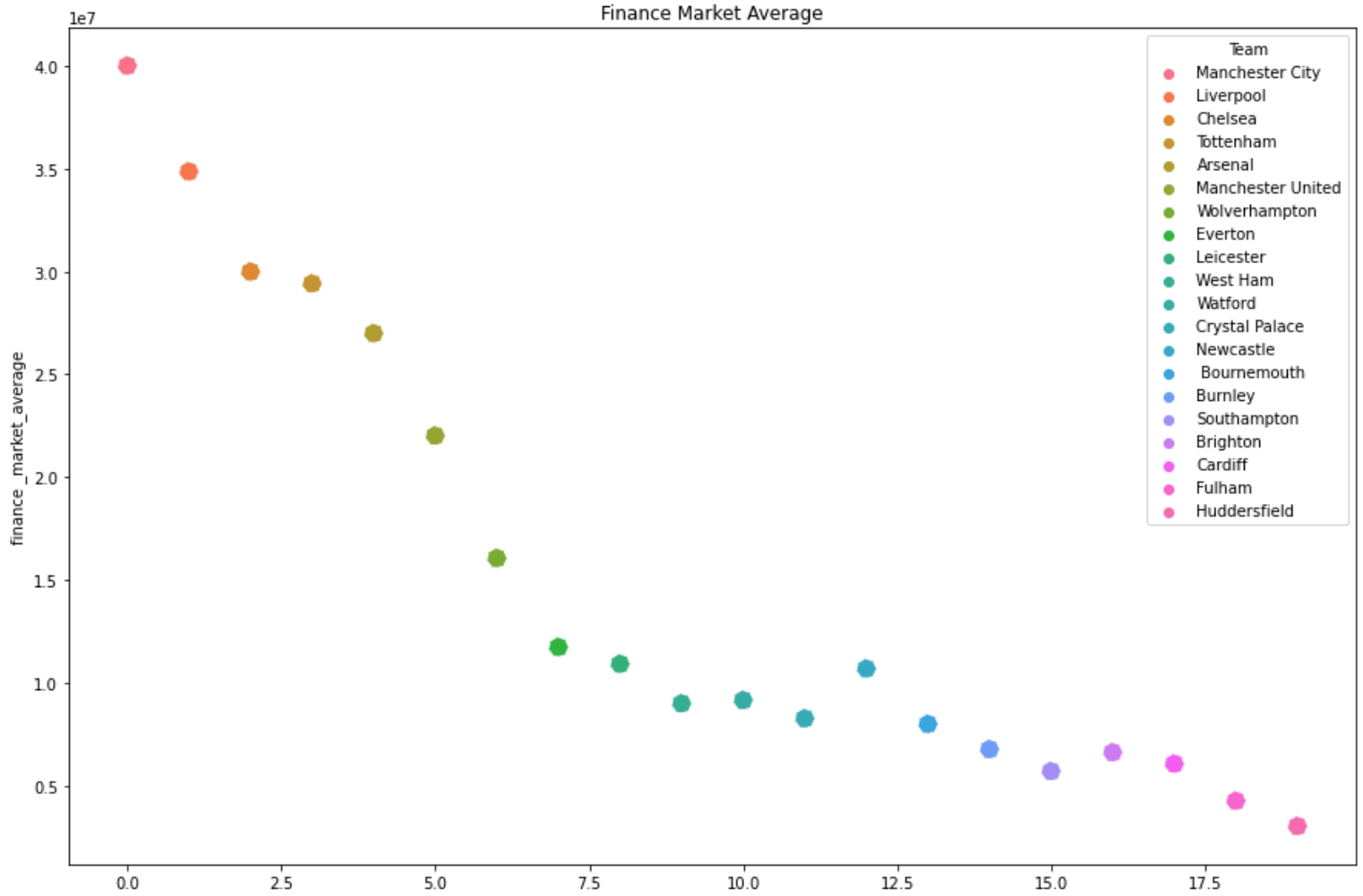
	finance _tv_revenue	Team
0	152425146	Liverpool
1	150986355	Manchester City
2	146030216	Chelsea
3	145230801	Tottenham
4	142512868	Manchester United
5	142193180	Arsenal
6	128603905	Everton
7	127165114	Wolverhampton
8	123328078	Leicester
9	122528663	West Ham
10	120130418	Newcastle
11	114215215	Crystal Palace
12	113895527	Watford
13	108139973	Bournemouth
14	107340558	Burnley
15	105741728	Brighton
16	104302937	Southampton
17	102704107	Cardiff
18	101904692	Fulham
19	96628865	Huddersfield

GOOD ON FINANCE TEAM MARKET



	finance _team_market	Team
0	1003200000	Manchester City
1	836440000	Liverpool
2	779460000	Chelsea
3	735240000	Tottenham
4	701800000	Arsenal
5	550440000	Manchester United
6	369600000	Wolverhampton
7	305360000	Everton
8	284240000	Leicester
9	234212000	West Ham
10	229240000	Watford
11	223520000	Crystal Palace
12	214060000	Newcastle
13	200288000	Bournemouth
14	176440000	Burnley
15	160072000	Southampton
16	152680000	Brighton
17	152020000	Cardiff
18	106920000	Fulham
19	85492000	Huddersfield

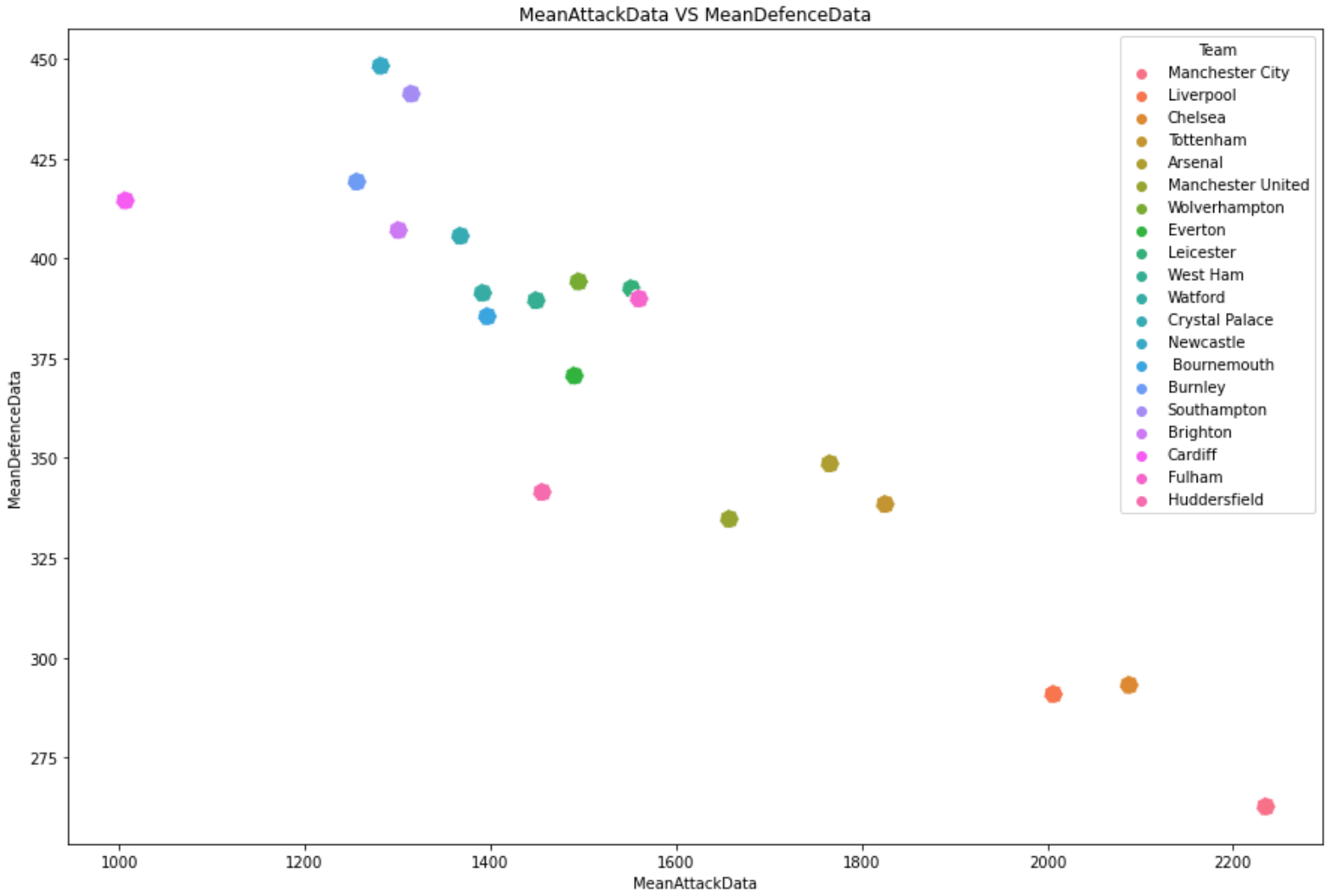
GOOD ON FINANCE MARKET AVERAGE



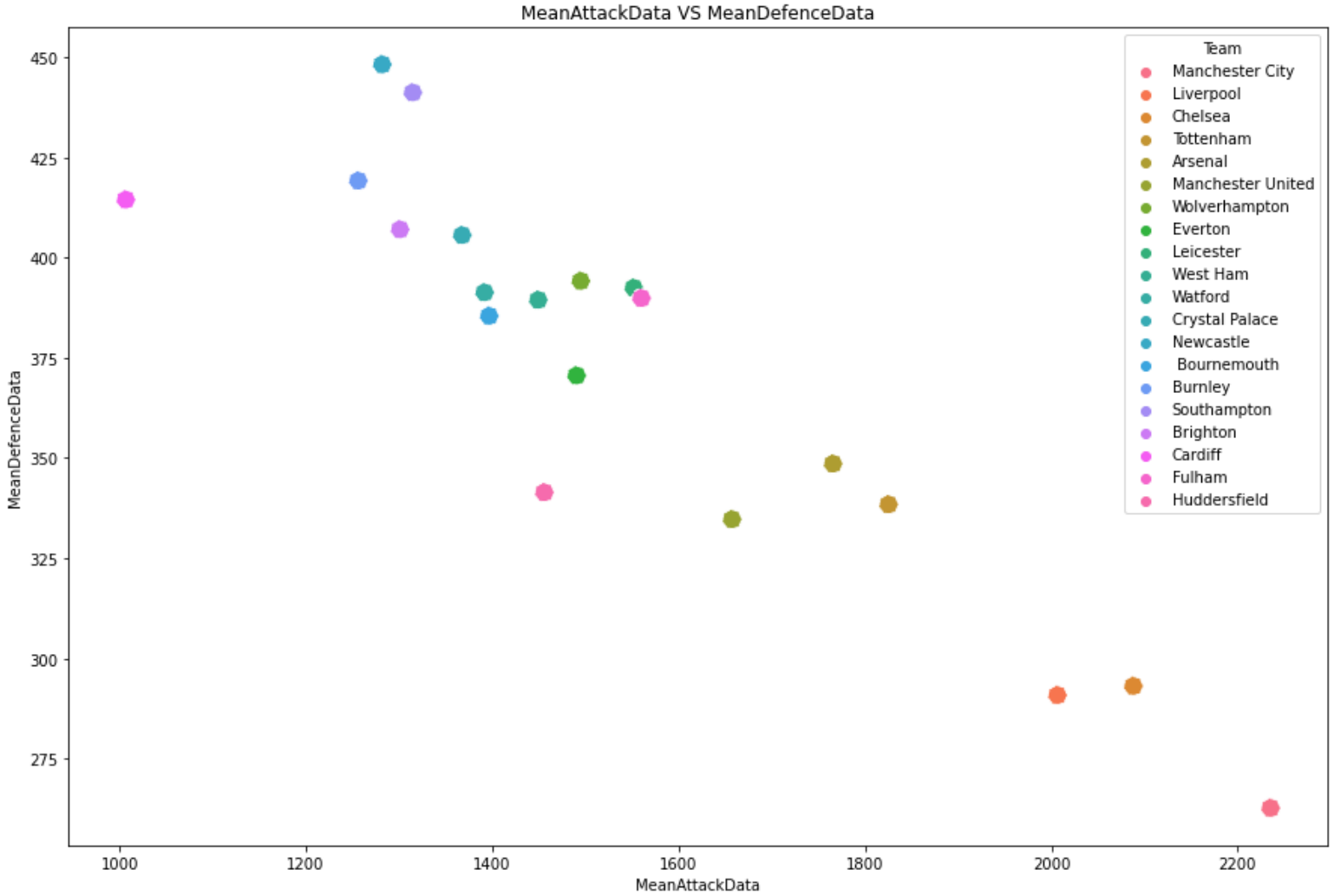
	finance _market_average	Team
0	39987200	Manchester City
1	34848000	Liverpool
2	29981600	Chelsea
3	29409600	Tottenham
4	26989600	Arsenal
5	22017600	Manchester United
6	16068800	Wolverhampton
7	11748000	Everton
8	10929600	Leicester
9	10700800	Newcastle
10	9169600	Watford
11	9011200	West Ham
12	8280800	Crystal Palace
13	8008000	Bournemouth
14	6784800	Burnley
15	6635200	Brighton
16	6080800	Cardiff
17	5720000	Southampton
18	4276800	Fulham
19	3053600	Huddersfield

MORE INSIGHT

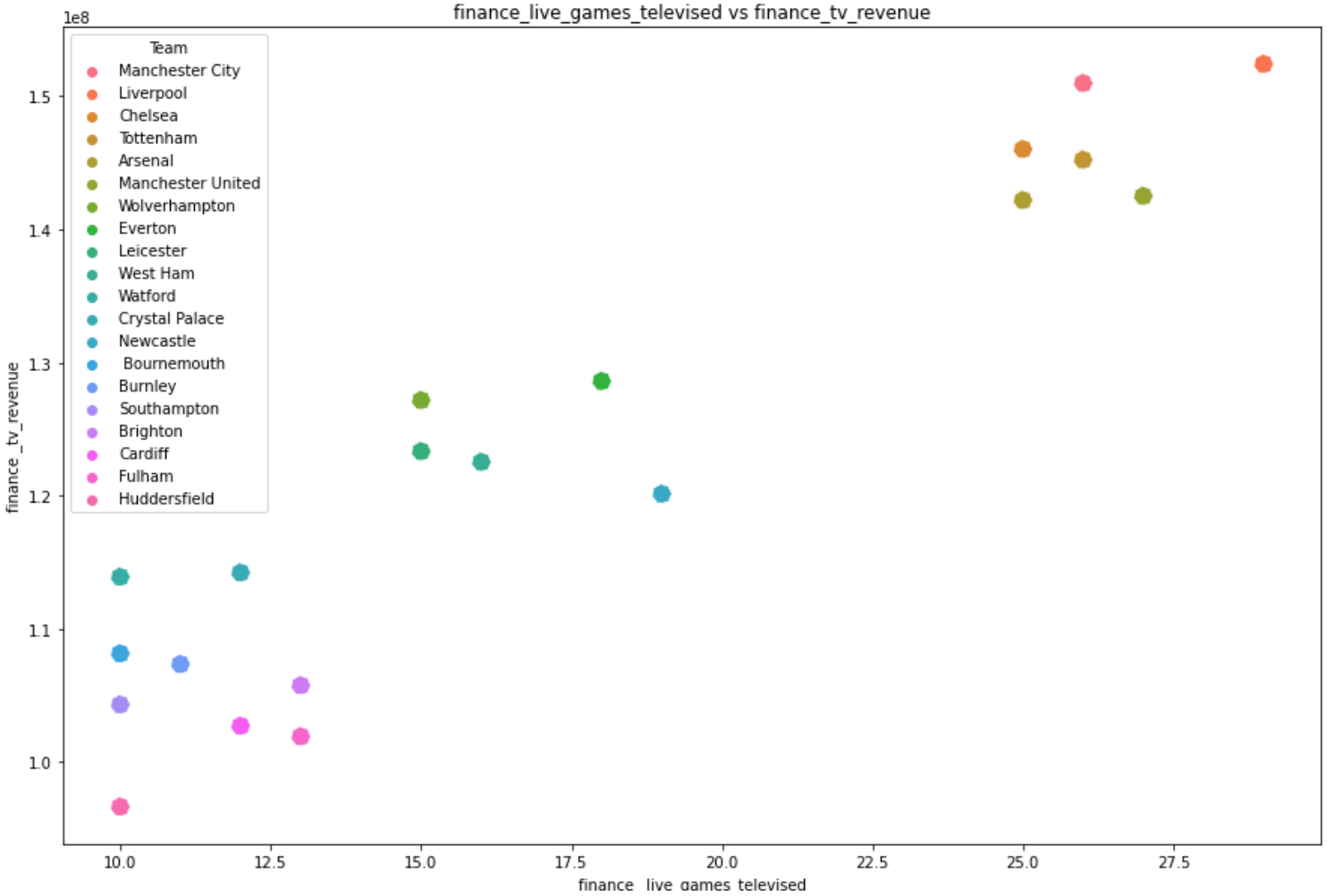
MEANATTACKDATA VS MEANDEFENCEDATA TEAM



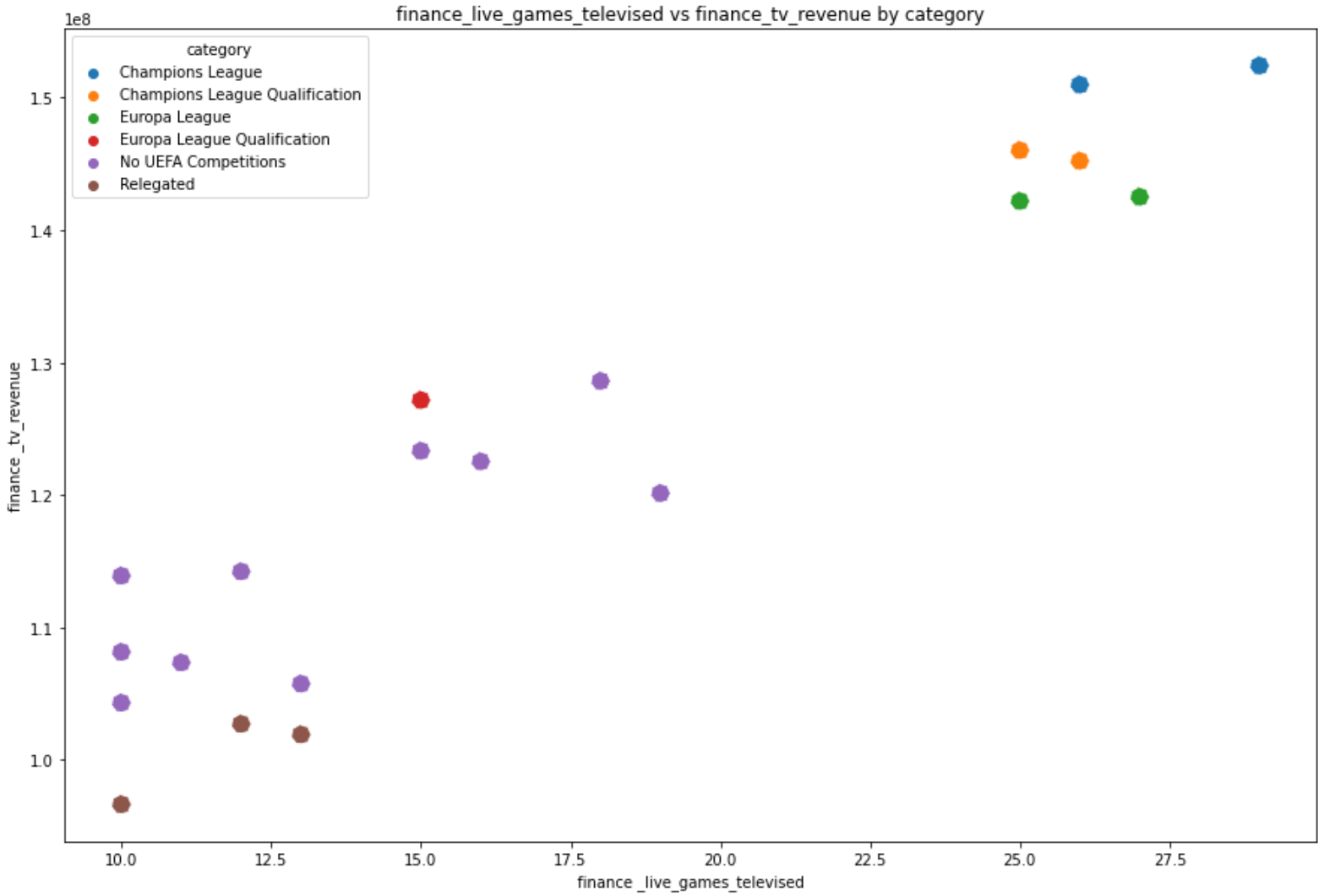
MEANATTACKDATA VS MEANDEFENCEDATA TEAM



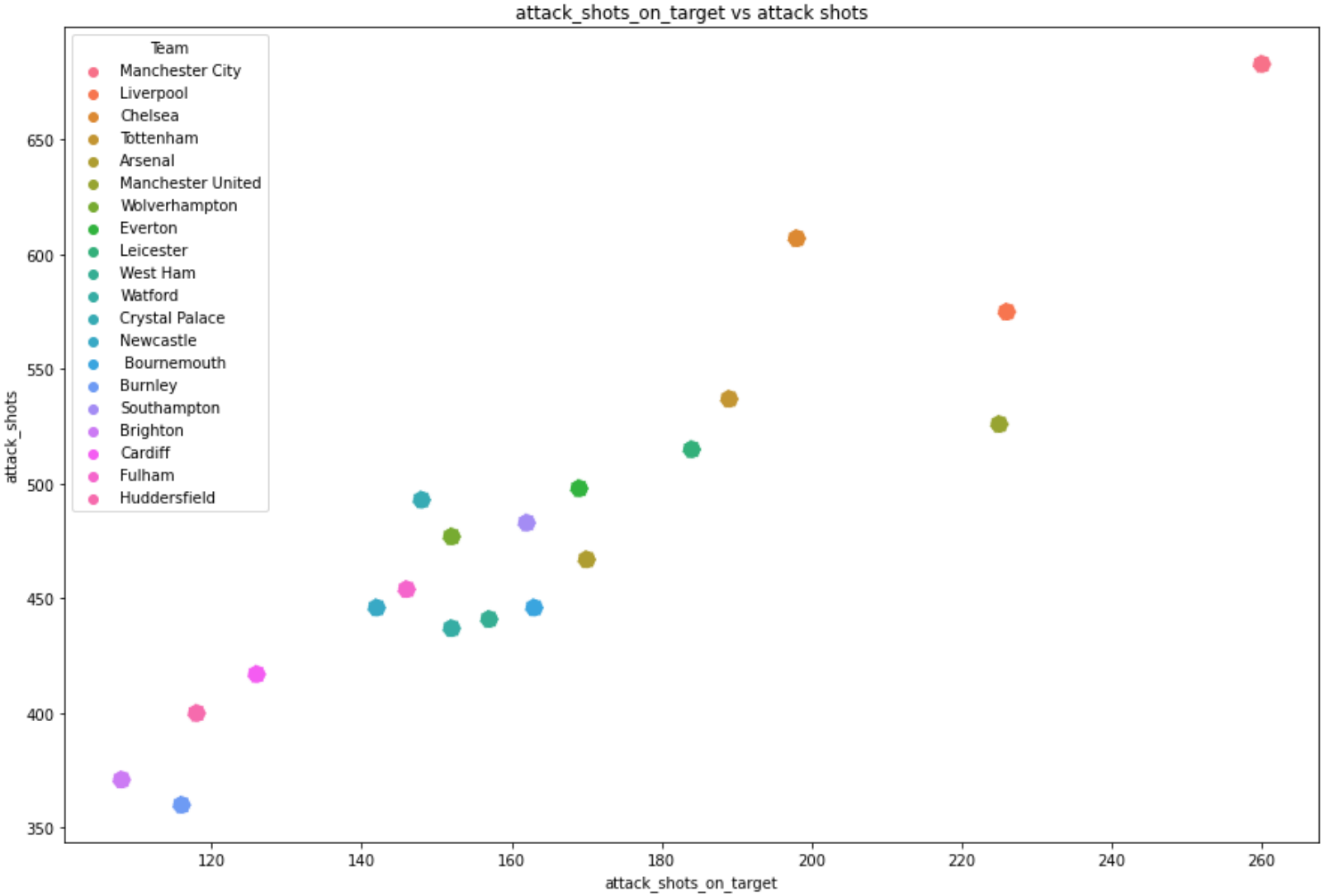
FINANCE_LIVE_GAMES_TELEVISED VS FINANCE_TV_REVENUE



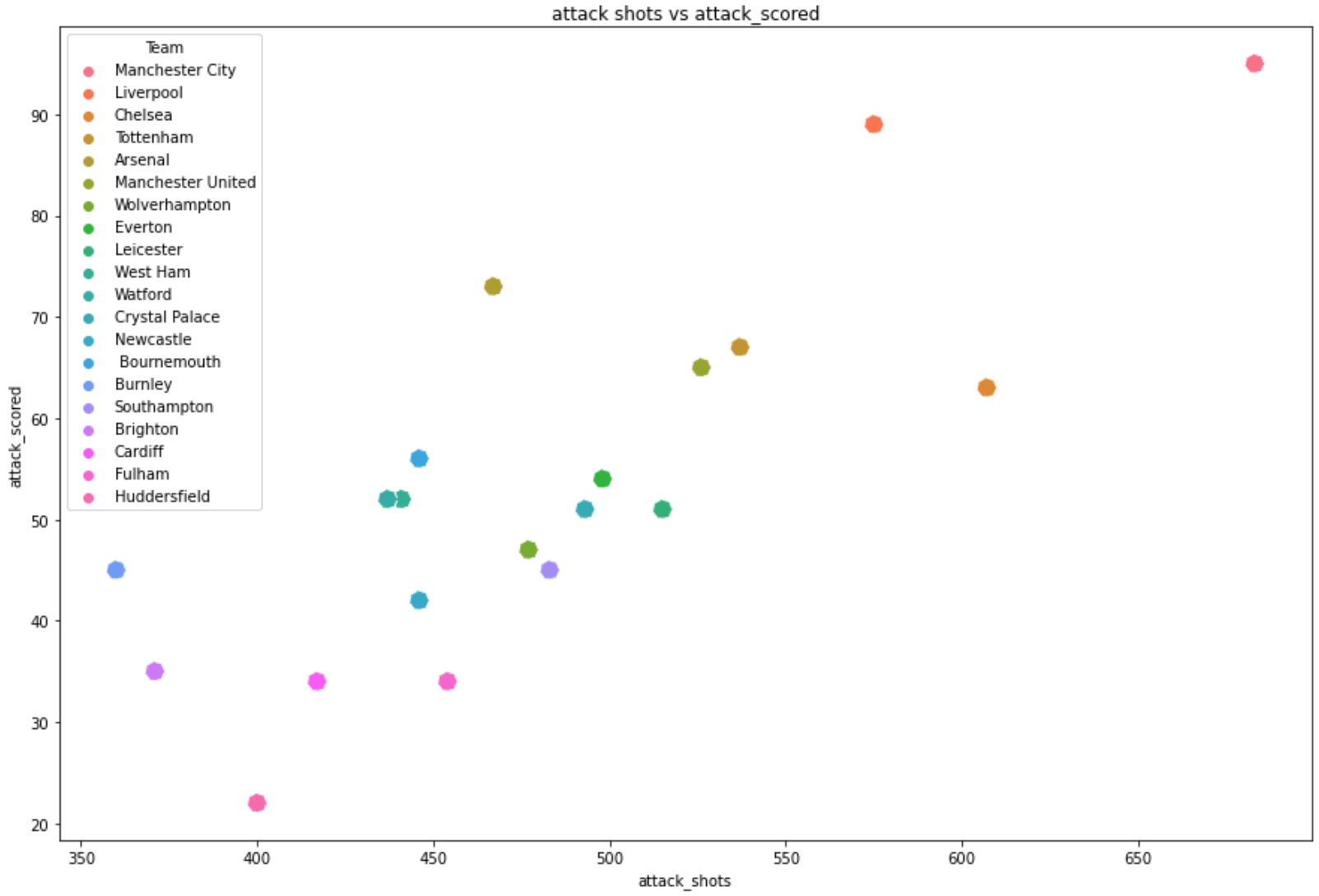
FINANCE_LIVE_GAMES_TELEVISED VS FINANCE_TV_REVENUE BY CATEGORY



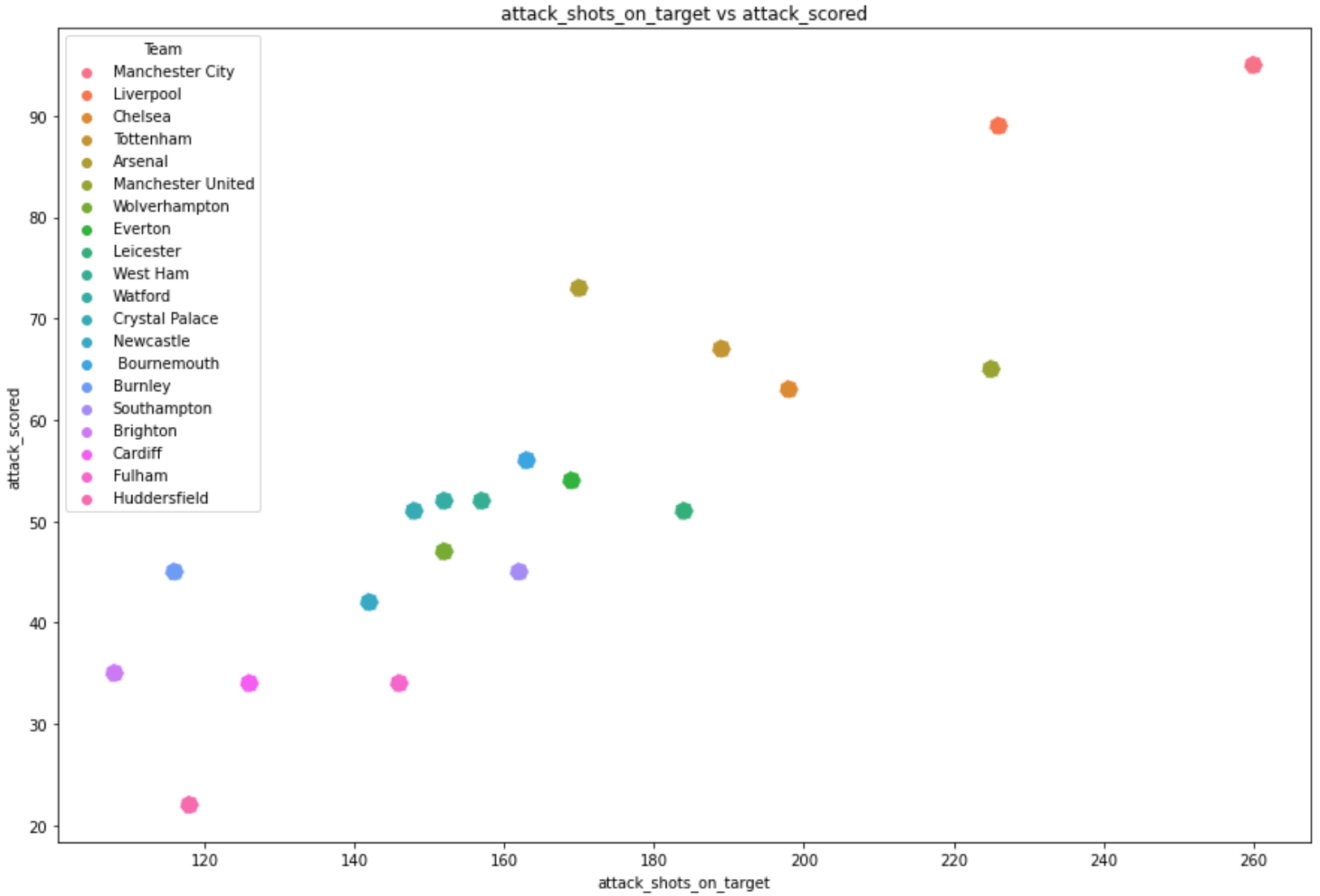
ATTACK_SHOTS_ON_TARGET VS ATTACK SHOTS



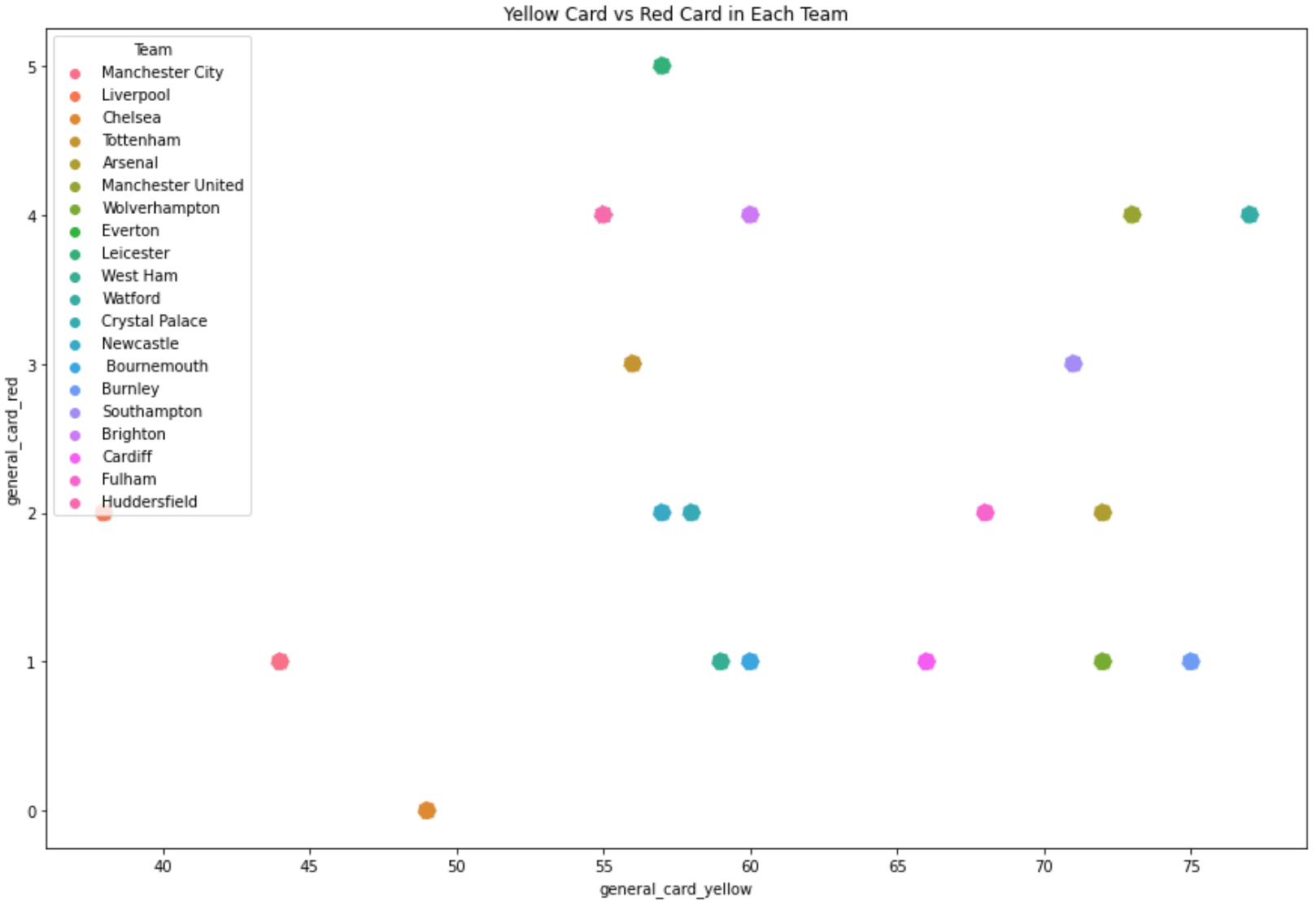
ATTACK SHOTS VS ATTACK_SCORED



ATTACK_SHOTS_ON_TARGET VS ATTACK_SCORED



YELLOW CARD VS RED CARD IN EACH TEAM



THANK YOU

GITHUB LINK :

https://github.com/ghzza/IYKRA_EDA/blob/main/8.%20EDA/GhazaliAkmalRabbani_EDA_V2.ipynb