PROJECT 1

BASEBALL DATA ANALYSIS

GROUP 4

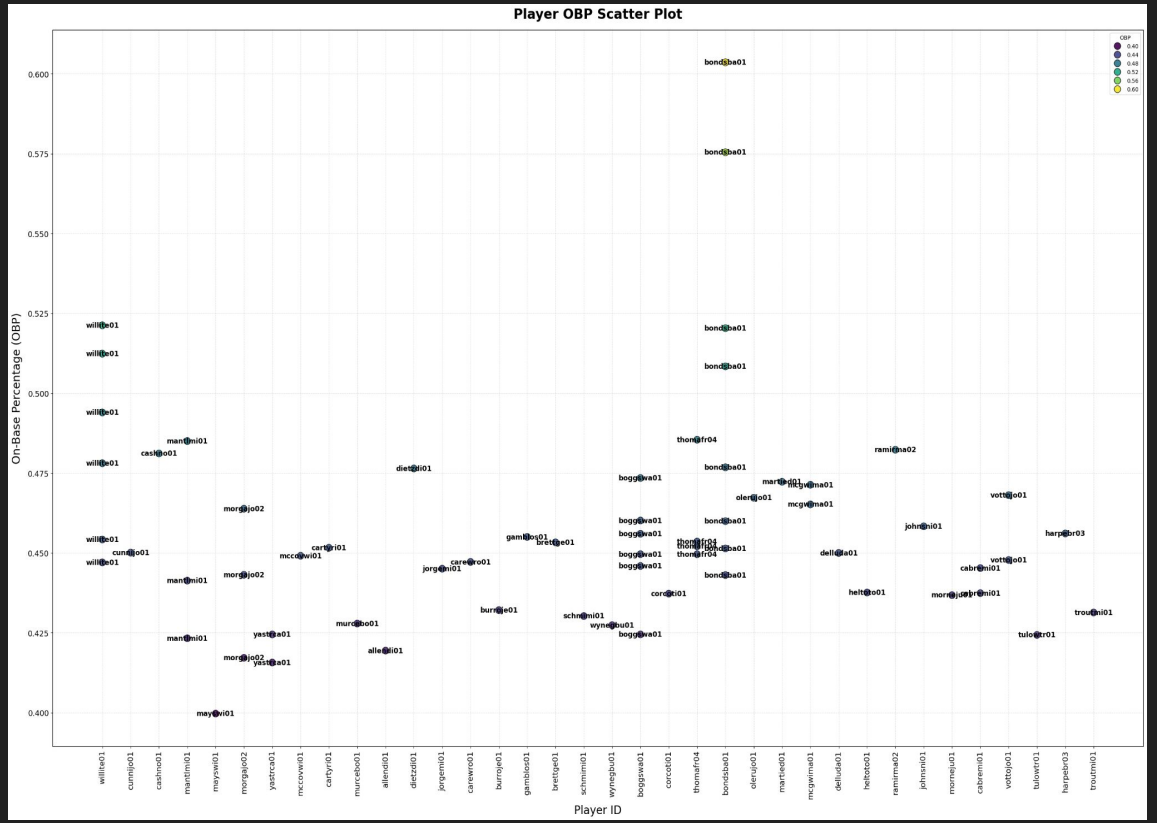
AGENDA

1. HIGHEST ON-BASE PERCENTAGE PLAYER PER YEAR
2. 30-30 CLUB
3. SLUGGING PERCENTAGE
4. DEADBALL

HIGHEST ON-BASE PERCENTAGE PLAYER PER YEAR

$$OBP = \frac{H + BB + HBP}{AB + BB + HBP + SF}$$

	H	BB	SH	AB	SF
1	32	4	NaN	118	NaN
2	40	2	NaN	137	NaN
3	44	0	NaN	133	NaN
4	39	2	NaN	120	NaN
7	63	13	NaN	157	NaN
...	...	...	...	...	...
104314	29	5	3.0	110	0.0
104318	72	26	0.0	299	3.0
104320	159	44	0.0	524	5.0
104321	101	54	2.0	435	3.0
104322	97	39	0.0	387	1.0



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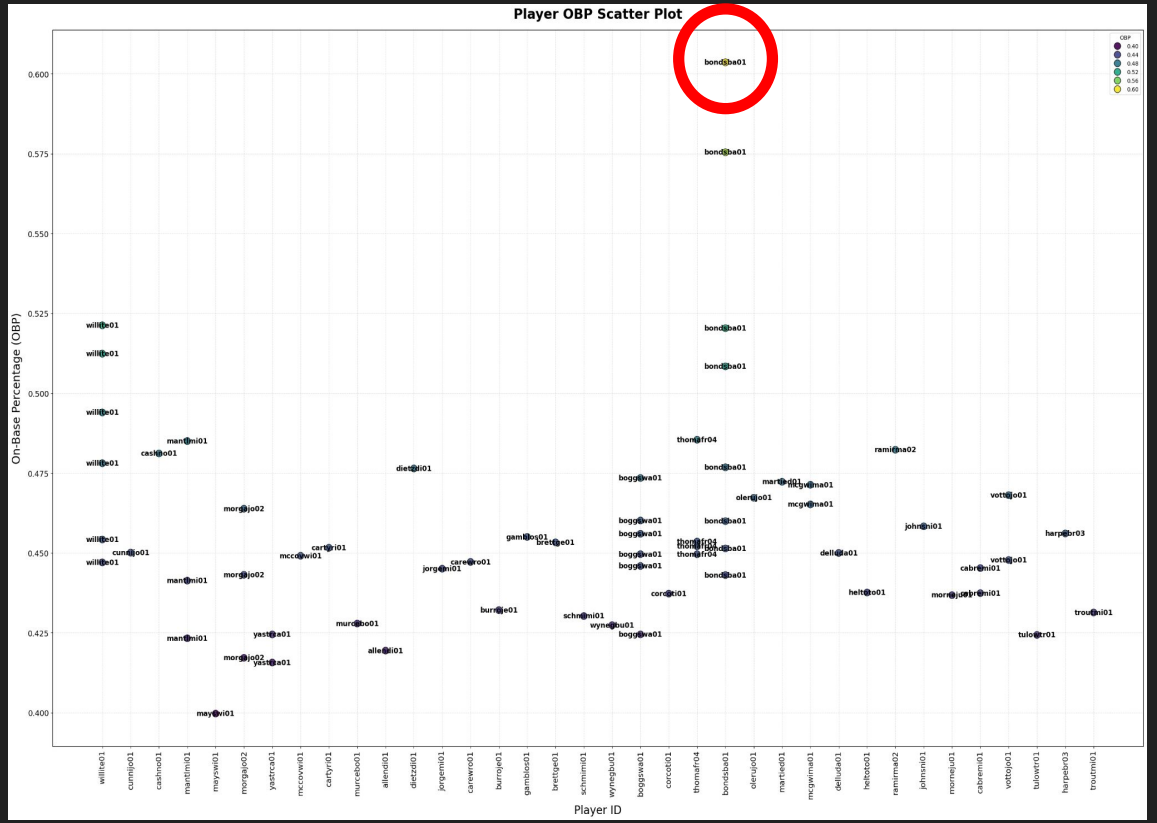
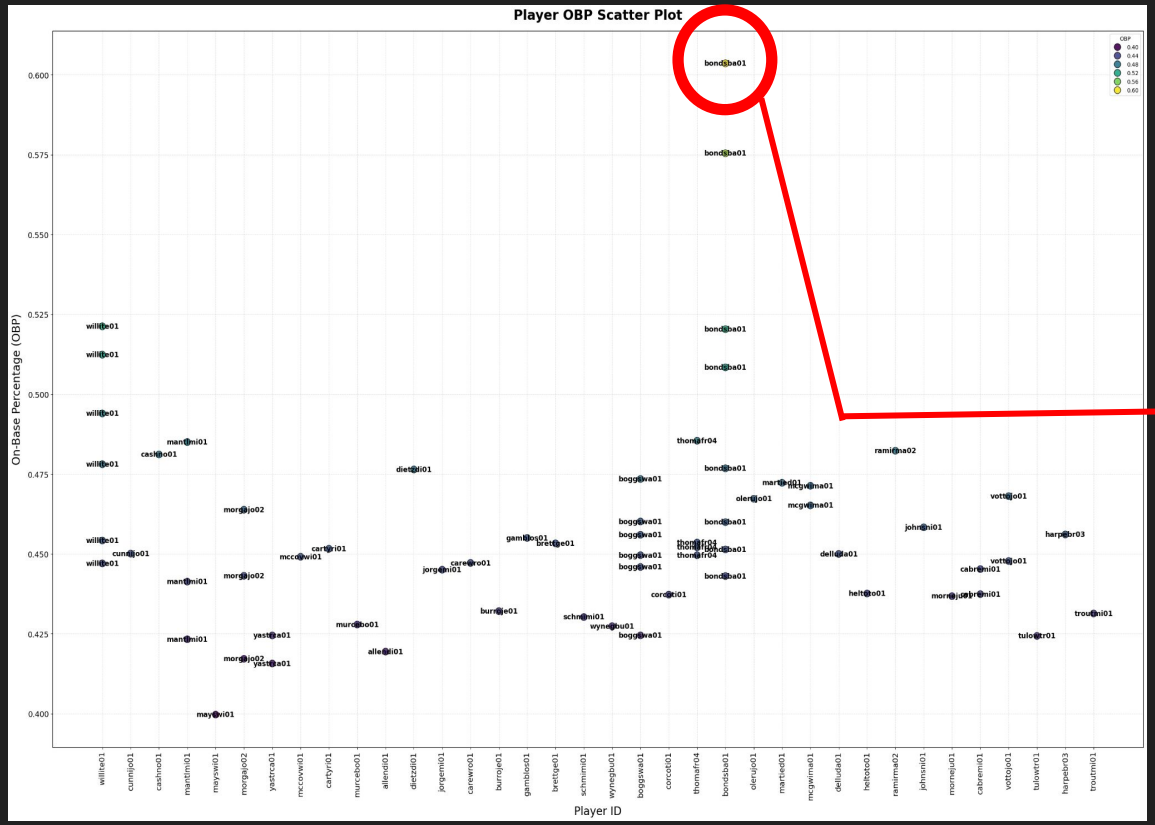


HIGHEST ON-BASE PERCENTAGE PLAYER PER YEAR



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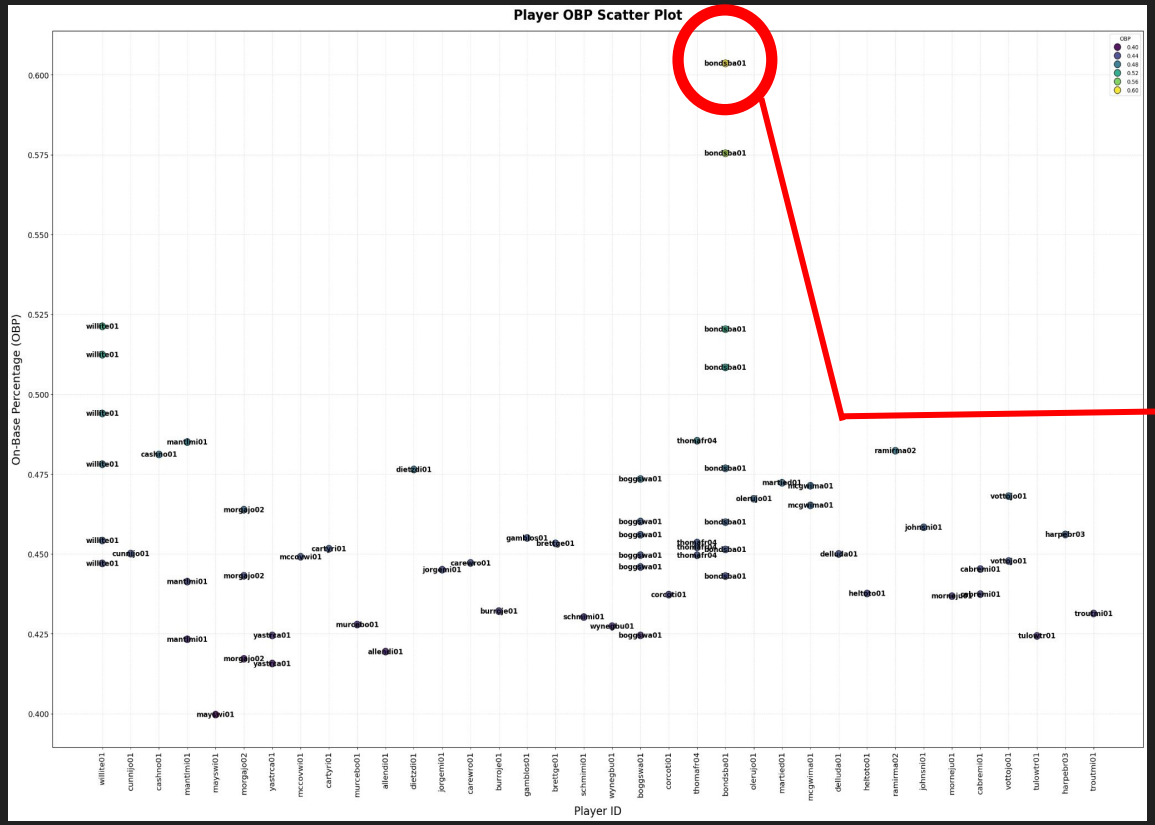
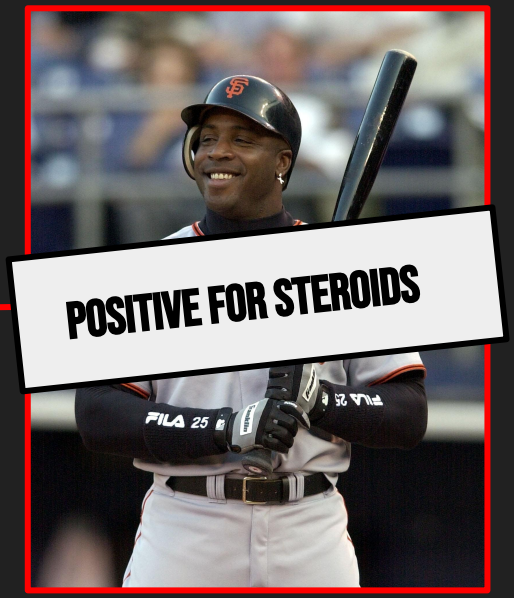
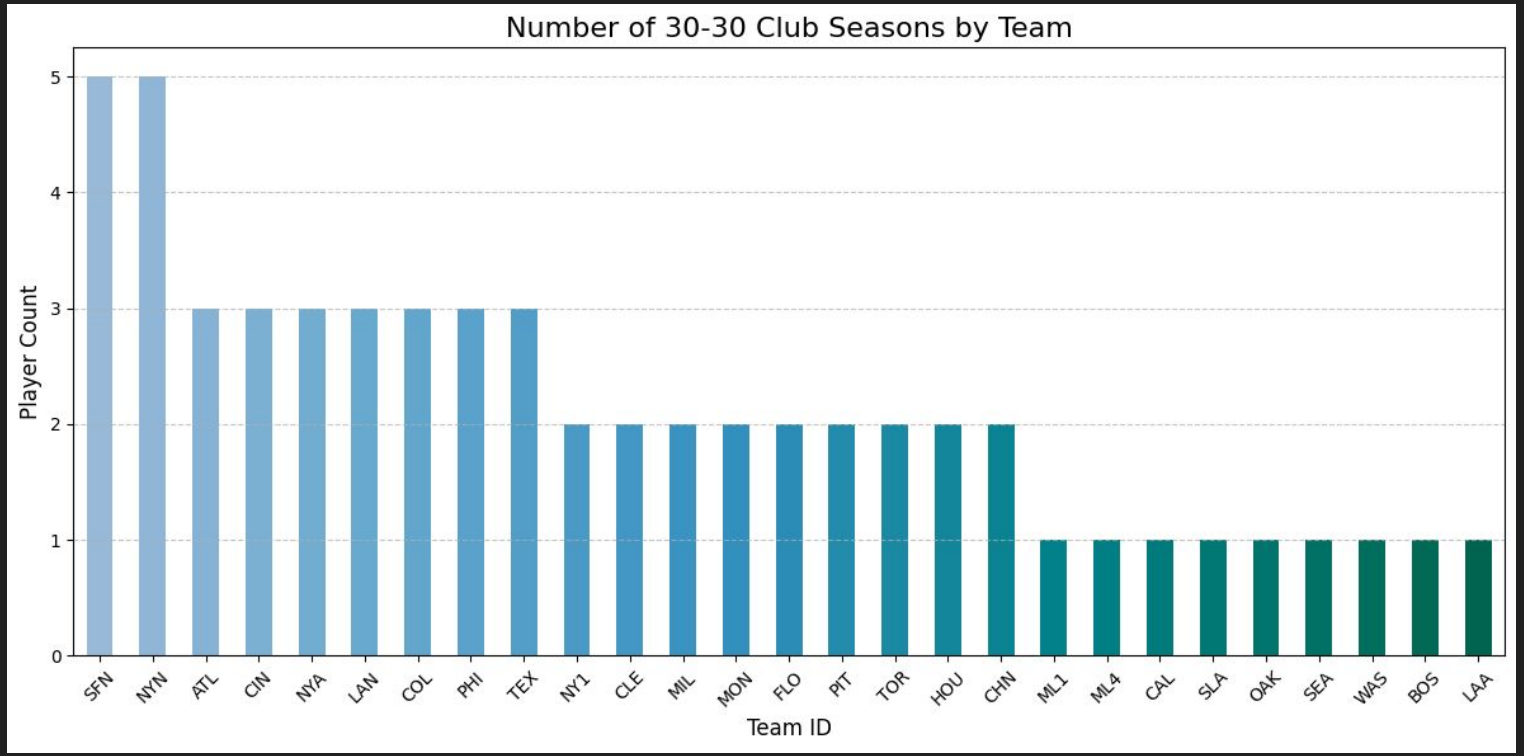
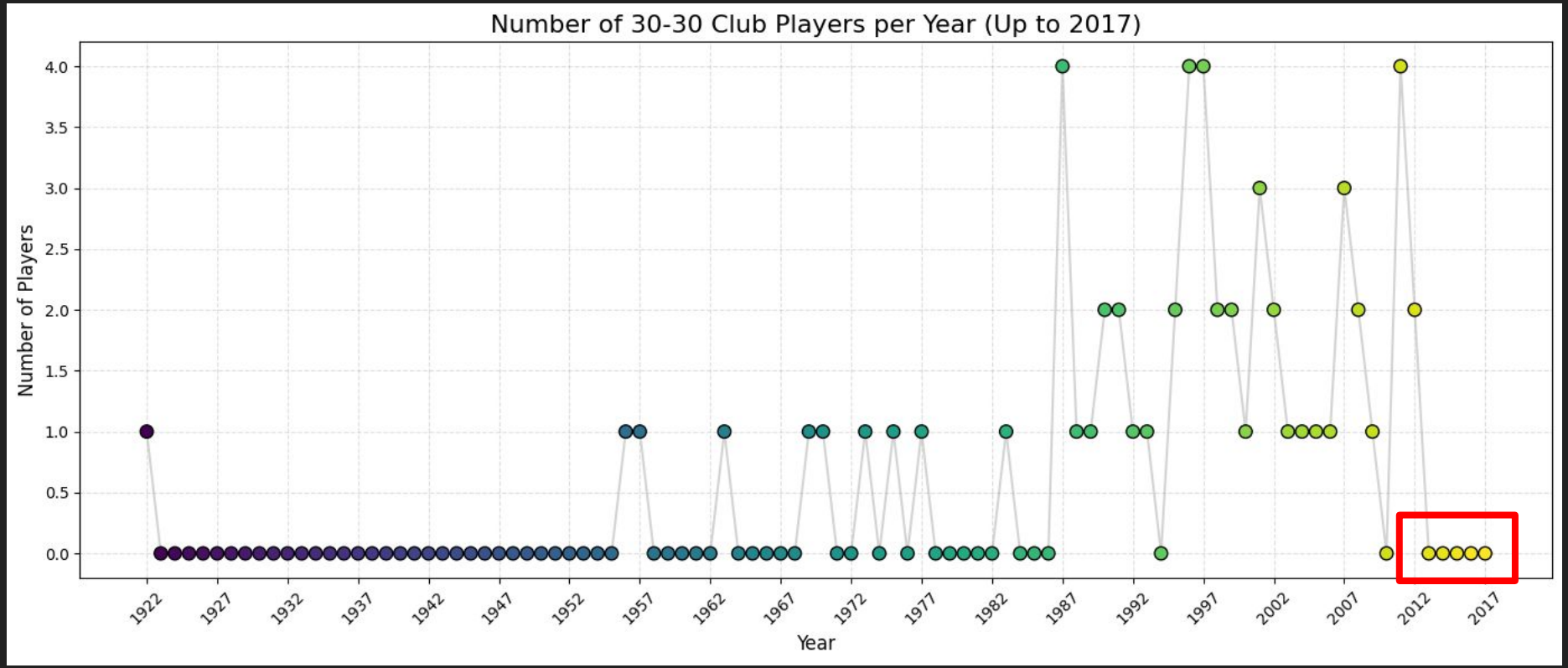




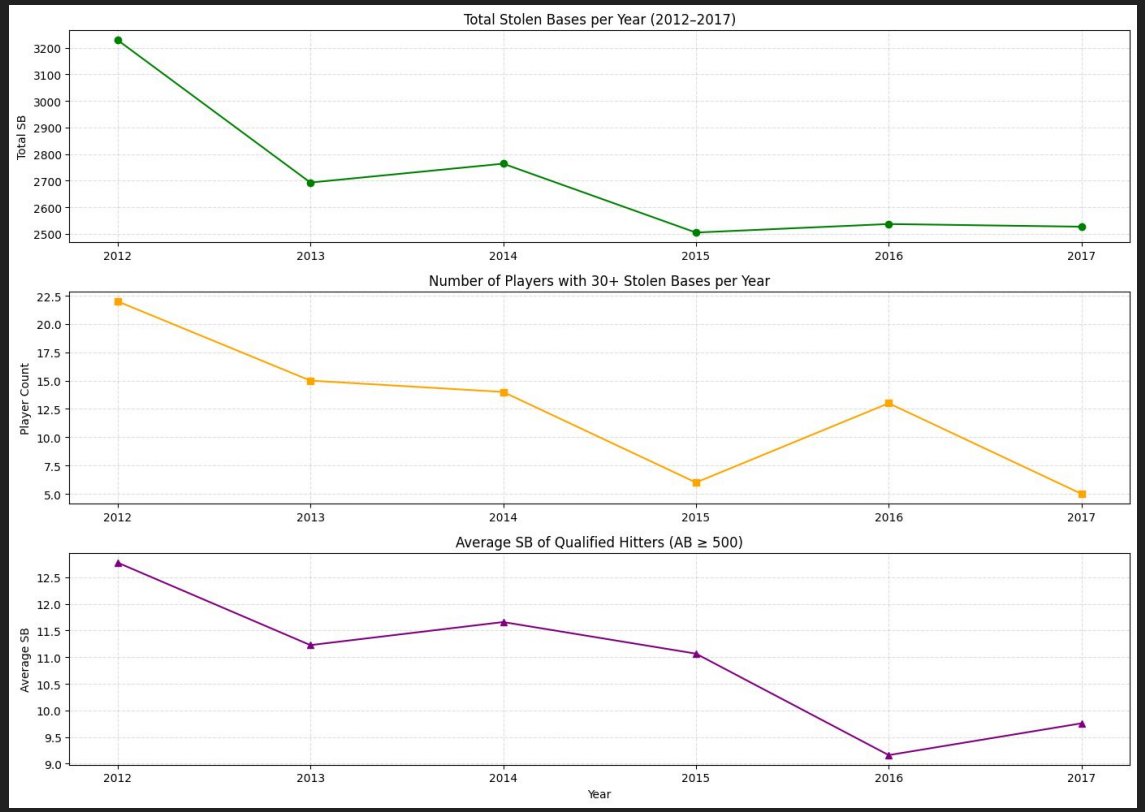
30–30 CLUB


Number of 30-30 Club Seasons by Team
Player Count
0
1
2
3
4
5
SFN
NYN
ATL
CIN
NYA
LAN
COL
PHI
TEX
NY1
CLE
MIL
MON
FLO
PIT
TOR
HOU
CHN
ML1
ML4
CAL
SLA
OAK
SEA
WAS
BOS
LAA
Team ID

30–30 CLUB


Number of 30-30 Club Players per Year (Up to 2017)
Number of Players
Year
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1922
1927
1932
1937
1942
1947
1952
1957
1962
1967
1972
1977
1982
1987
1992
1997
2002
2007
2012
2017

30-30 CLUB

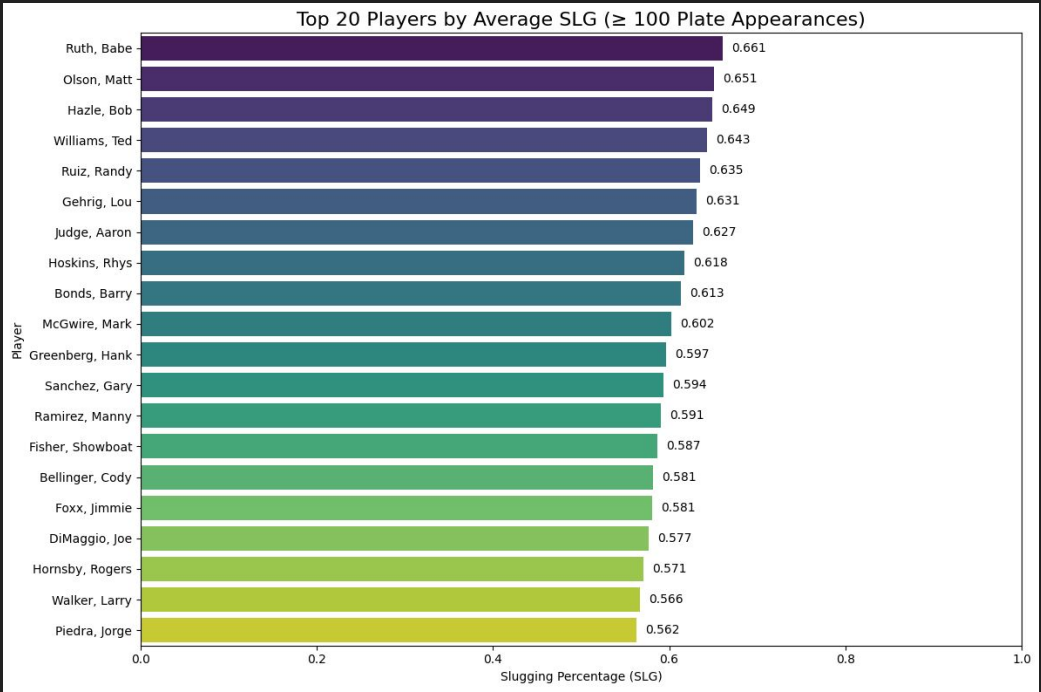


>2012
SB RATE **DECREASED**

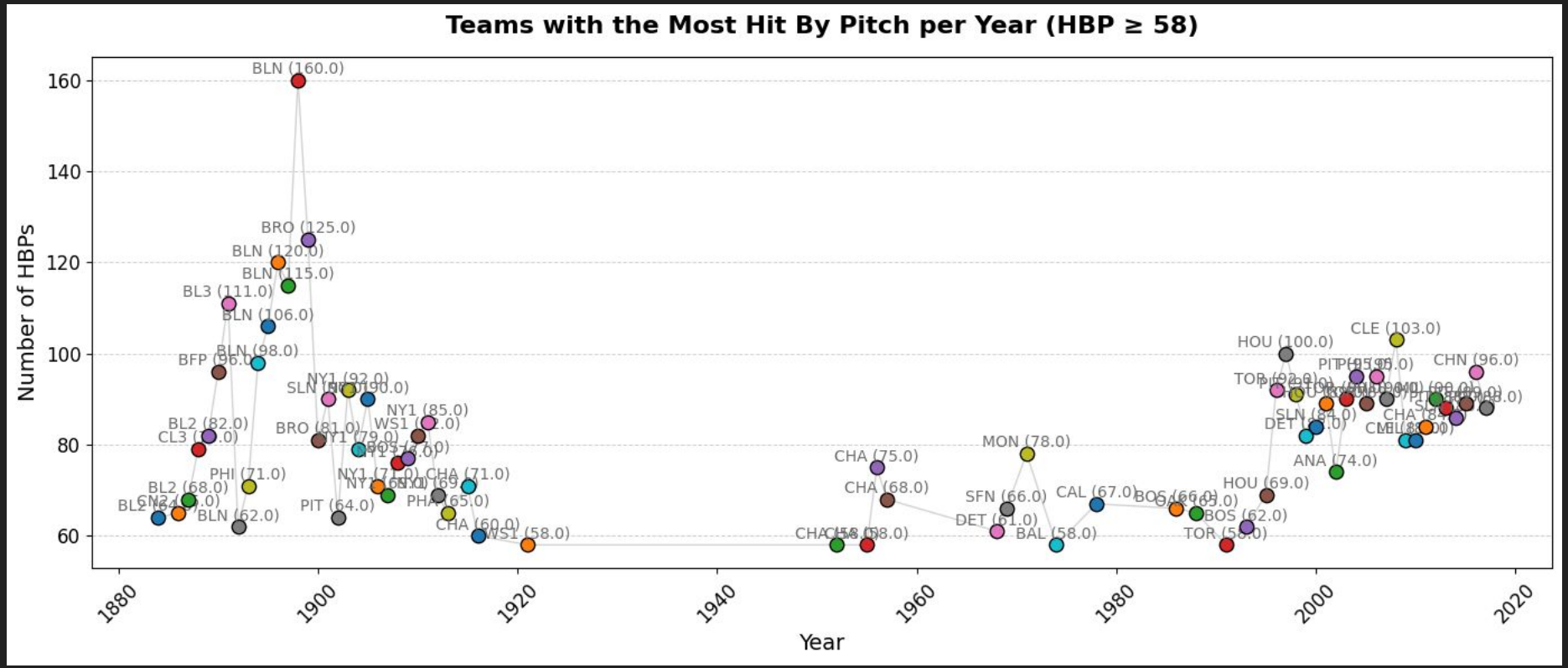
DECREASE OF 30-30 CLUB

SLUGGING PERCENTAGE

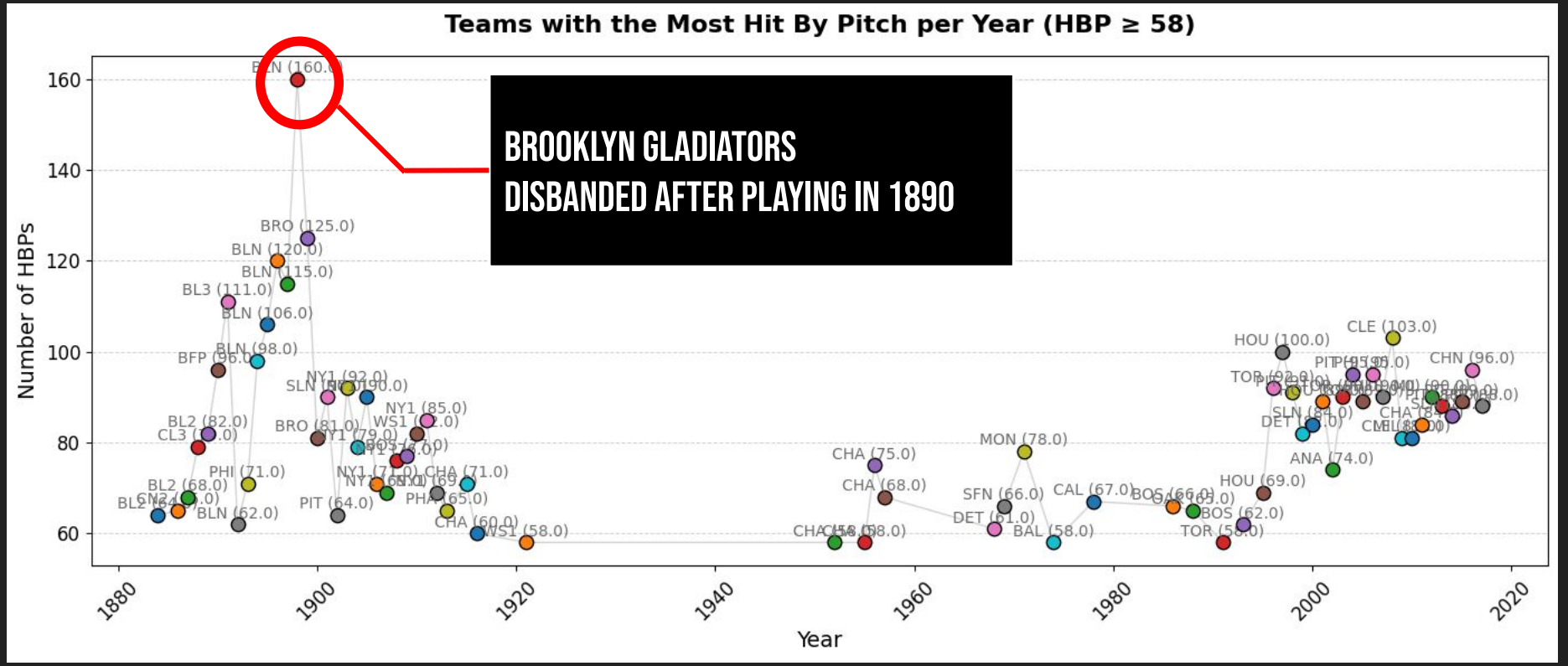
$$SLG = \frac{(1\text{B}) + 2\times(2\text{B}) + 3\times(3\text{B}) + 4\times(\text{HR})}{\text{AB}}$$



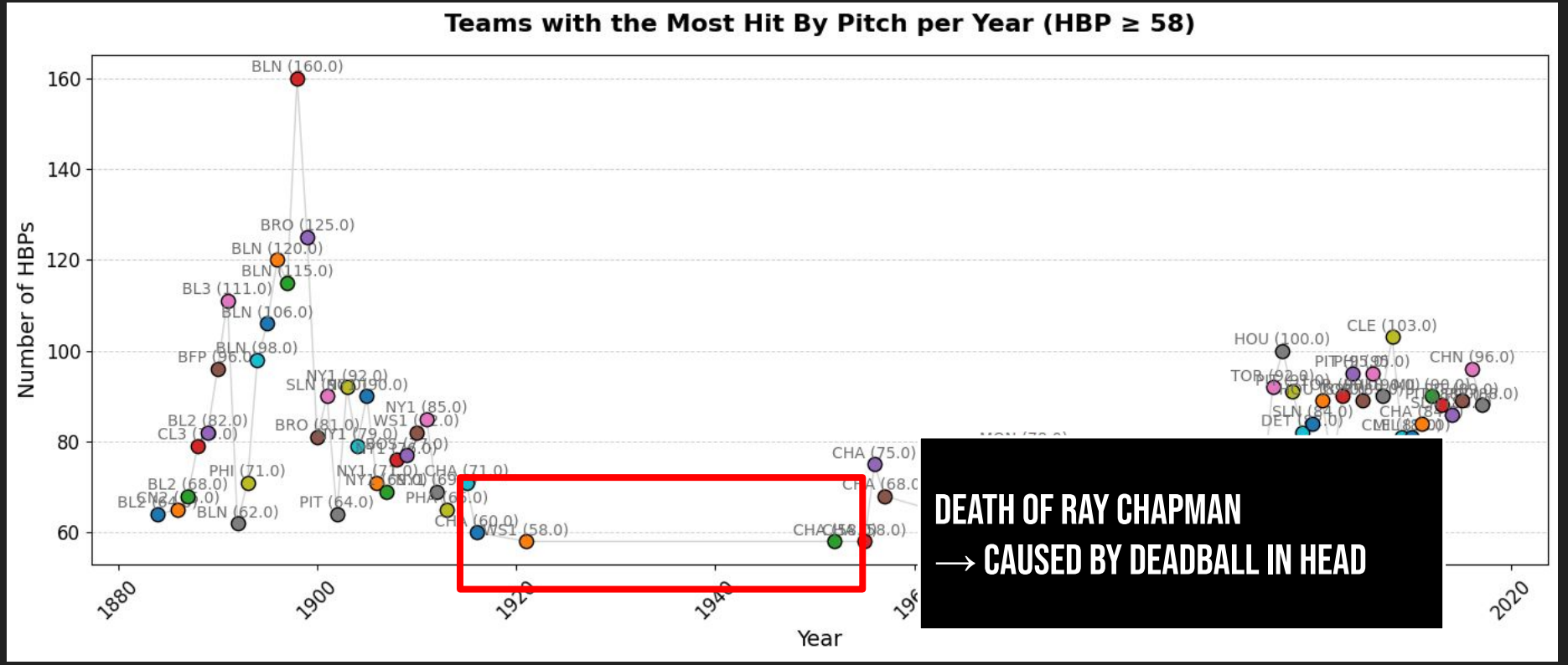
DEADBALL


Teams with the Most Hit By Pitch per Year (HBP ≥ 58)
Number of HBPs
Year
160
140
120
100
80
60
1880
1900
1920
1940
1960
1980
2000
2020
BLN (160.0)
BRO (125.0)
BLN (120.0)
BLN (115.0)
BL3 (111.0)
BLN (106.0)
BLN (98.0)
BFP (96.0)
NY1 (92.0)
NY1 (85.0)
BL2 (82.0)
BRO (81.0)
NY1 (79.0)
PHI (71.0)
BL2 (68.0)
PIT (64.0)
BLN (62.0)
CHA (71.0)
CHA (60.0)
WS1 (58.0)
CHA (75.0)
CHA (68.0)
MON (78.0)
SFN (66.0)
CAL (67.0)
DET (61.0)
BAL (58.0)
HOU (69.0)
BOS (62.0)
TOR (58.0)
ANA (74.0)
HOU (100.0)
CLE (103.0)
CHN (96.0)
SLN (84.0)
CHA (84.0)

DEADBALL


Teams with the Most Hit By Pitch per Year (HBP ≥ 58)
Number of HBPs
Year
BROOKLYN GLADIATORS
DISBANDED AFTER PLAYING IN 1890
BRO (125.0)
BLN (120.0)
BLN (115.0)
BL3 (111.0)
BLN (106.0)
BLN (98.0)
BFP (96.0)
NY1 (92.0)
NY1 (85.0)
BL2 (82.0)
BRO (81.0)
NY1 (79.0)
PHI (71.0)
BL2 (68.0)
BLN (62.0)
PIT (64.0)
CHA (60.0)
CHA (75.0)
CHA (68.0)
MON (78.0)
SFN (66.0)
DET (61.0)
BAL (58.0)
CAL (67.0)
HOU (100.0)
CLE (103.0)
CHN (96.0)
ANA (74.0)
HOU (69.0)
BOS (62.0)
TOR (58.0)

DEADBALL


Teams with the Most Hit By Pitch per Year (HBP ≥ 58)
Number of HBPs
Year
160
140
120
100
80
60
1880
1900
1920
1940
2020
BLN (160.0)
BRO (125.0)
BLN (120.0)
BLN (115.0)
BL3 (111.0)
BLN (106.0)
BLN (98.0)
BFP (96.0)
NY1 (92.0)
NY1 (85.0)
BL2 (82.0)
BRO (81.0)
PHI (71.0)
BL2 (68.0)
PIT (64.0)
BLN (62.0)
CHA (60.0)
WS1 (58.0)
CHA (75.0)
CLE (103.0)
HOU (100.0)
CHN (96.0)
DET (84.0)
CHA (68.0)
DEATH OF RAY CHAPMAN
→ CAUSED BY DEADBALL IN HEAD