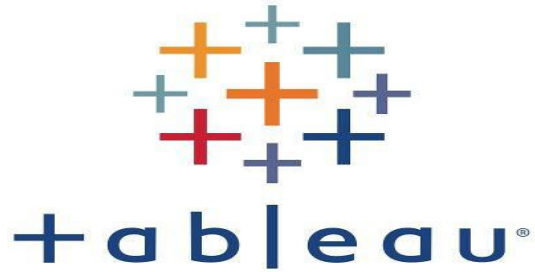


Data Analytics Final Project: NFL Teams Win Statistics



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Tools/Programs



Questions We Hope to Answer

We hope to find out if a team can have a better record than projected using data from their past to predict if their future would be a better record or worse.

It's in the Data

We used data from ProFootball Reference, NFL.com, ESPN.com, and individual team websites.



We gathered offensive rating, defensive rating and QBR stats from ProFootball Reference and ESPN.com



NFL.com we found the divisions and their seasonal records for wins and losses.



Individual team websites provided the head coaching returned or not information



Wins/Losses 2019-2021 Percentages

Out[38]:

	team_name	div	team_id	wins_2021	losses_2021	win_pct_2021	wins_2020	losses_2020	win_pct_2020	wins_2019	...	qbr_2019	off_ranking_2021	off_ranking_2020	off_ranking_2019
0	Arizona	NFC	NFC001	11	6	0.647	8	8	0.5	5	...	87	8	6	10
1	Atlanta	NFC	NFC002	7	10	0.412	4	12	0.25	7	...	93.8	29	18	20
2	Baltimore	AFC	AFC001	8	9	0.471	11	5	0.688	14	...	109	6	19	10
3	Buffalo	AFC	AFC002	11	6	0.647	13	3	0.813	10	...	82.9	5	2	10
4	Carolina	NFC	NFC003	5	12	0.294	5	11	0.313	5	...	74.7	30	21	10
5	Chicago	NFC	NFC004	6	11	0.353	8	8	0.5	8	...	83.9	24	26	10
6	Cincinnati	AFC	AFC003	10	7	0.588	4	11	0.281	2	...	76.2	13	29	10
7	Cleveland	AFC	AFC004	8	9	0.471	11	5	0.688	6	...	78.4	18	16	10
8	Dallas	NFC	NFC005	12	5	0.706	6	10	0.375	8	...	99.5	1	14	10
9	Denver	AFC	AFC005	7	10	0.412	5	11	0.313	7	...	84.1	19	23	10
10	Detroit	NFC	NFC006	3	13	0.206	5	11	0.313	3	...	88.2	22	20	10
11	Green Bay	NFC	NFC007	13	4	0.765	13	3	0.813	13	...	95.3	10	5	10
12	Houston	AFC	AFC006	4	13	0.235	4	12	0.25	10	...	95.3	32	13	10
13	Indianapolis	AFC	AFC007	9	8	0.529	11	5	0.688	7	...	85	16	10	10
14	Jacksonville	AFC	AFC008	3	14	0.176	1	15	0.063	6	...	90	27	28	10
15	Kansas City	AFC	AFC009	12	5	0.706	14	2	0.875	12	...	104.4	3	1	10
16	Las Vegas	AFC	AFC010	10	7	0.588	8	8	0.5	5	...	85.6	9	11	10
17	Los Angeles Chargers	AFC	AFC016	9	8	0.529	7	9	0.438	5	...	101	11	8	10
18	Los Angeles Rams	NFC	NFC008	12	5	0.706	10	6	0.625	9	...	89	4	9	10
19	Miami	AFC	AFC011	9	8	0.529	10	6	0.625	12	...	80	25	22	10
20	Minnesota	NFC	NFC009	8	9	0.471	7	9	0.438	10	...	103.9	12	4	10

Win/Loss 2019-2021 continued...

21	New England	AFC	AFC012	10	7	0.588	7	9	0.438	7 ...	88.2	15	27
22	New Orleans	NFC	NFC010	9	8	0.529	12	4	0.75	13 ...	110.2	28	12
23	NY Giants	NFC	NFC011	4	13	0.235	6	10	0.375	4 ...	80.6	26	32
24	NY Jets	AFC	AFC013	4	13	0.235	2	14	0.125	7 ...	86.4	31	31
25	Philadelphia	NFC	NFC012	9	8	0.529	4	11	0.281	9 ...	92.1	14	24
26	Pittsburgh	AFC	AFC014	9	7	0.559	12	4	0.75	8 ...	76.1	23	25
27	San Francisco	NFC	NFC013	10	7	0.588	6	10	0.375	13 ...	103.1	7	15
28	Seattle	NFC	NFC014	7	10	0.412	12	4	0.75	11 ...	105.3	20	17
29	Tampa Bay	NFC	NFC015	13	4	0.765	11	5	0.688	7 ...	84.1	2	7
30	Tennessee	AFC	AFC015	12	5	0.706	11	5	0.688	9 ...	108.3	17	3
31	Washington	NFC	NFC016	7	10	0.412	7	9	0.438	3 ...	83	21	30

32 rows × 24 columns

Teams

Out[27]:

	team_name	div	team_id
0	Arizona	NFC	NFC001
1	Atlanta	NFC	NFC002
2	Baltimore	AFC	AFC001
3	Buffalo	AFC	AFC002
4	Carolina	NFC	NFC003
5	Chicago	NFC	NFC004
6	Cincinnati	AFC	AFC003
7	Cleveland	AFC	AFC004
8	Dallas	NFC	NFC005
9	Denver	AFC	AFC005
10	Detroit	NFC	NFC006
11	Green Bay	NFC	NFC007
12	Houston	AFC	AFC006
13	Indianapolis	AFC	AFC007
14	Jacksonville	AFC	AFC008
15	Kansas City	AFC	AFC009
16	Las Vegas	AFC	AFC010
17	Los Angeles Chargers	AFC	AFC016
18	Los Angeles Rams	NFC	NFC008
19	Miami	AFC	AFC011

15	Kansas City	AFC	AFC009
16	Las Vegas	AFC	AFC010
17	Los Angeles Chargers	AFC	AFC016
18	Los Angeles Rams	NFC	NFC008
19	Miami	AFC	AFC011
20	Minnesota	NFC	NFC009
21	New England	AFC	AFC012
22	New Orleans	NFC	NFC010
23	NY Giants	NFC	NFC011
24	NY Jets	AFC	AFC013
25	Philadelphia	NFC	NFC012
26	Pittsburgh	AFC	AFC014
27	San Francisco	NFC	NFC013
28	Seattle	NFC	NFC014
29	Tampa Bay	NFC	NFC015
30	Tennessee	AFC	AFC015
31	Washington	NFC	NFC016