Rankings 2023

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As the NFL 2023 season is starting today, I am introducing my power rankings. These are based off of three projects I worked on in the offseason.

Pythagorean Model

The first model combines the 2022 Pythagorean wins (with optimal k exponent) and Kevin Cole's offseason improvement index. This gives us an estimated win total, however we want to to see how much better each team is than the average team (points-wise). Thus, I normalized this metric and adjusted for a 12 point difference between the worst and best team, as there is more uncertainty in the beginning of the season. The goal of this model is to see the fundamental strength of last year's team and adjust it for the new additions in the offseason.

Pythagorean NFL Power Rankings (2022 + II)
Projected Spread against an Average Team
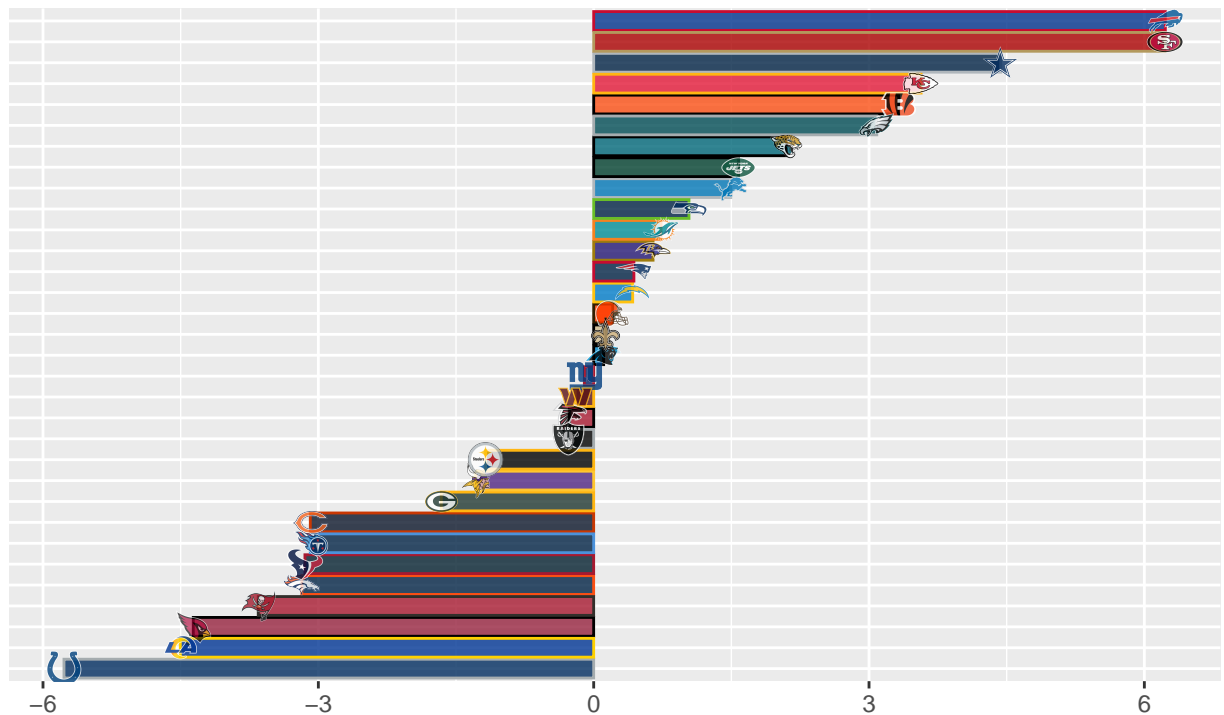
By: Sam Burch | Data @nflfastR & @unexpected_pts

EPA / SR Model

The next model uses similar methodology. Last year (before the playoffs) my power rankings used EPA per play and success rate for offense and defense. I normalized each of these four metrics and weighted them 70-30 for the offense and defense respectively. To get the spread differential, I used a 20-point difference – since we knew more about the teams at this point. By making such power rankings and adjusting them for each week in the playoffs, my numbers went 9-3-1 against the market spread (Draft Kings) last postseaon. Because of this and offensive play being more stable year-to-year, I am using these rankings as the base rate for this model – instead of Pythagorean wins, in the first model. Then, I am adjusting this base rate for the offseason improvement index (Kevin Cole).

EPA / SR NFL Power Rankings (2022 + II)

### Projected Spread against an Average Team
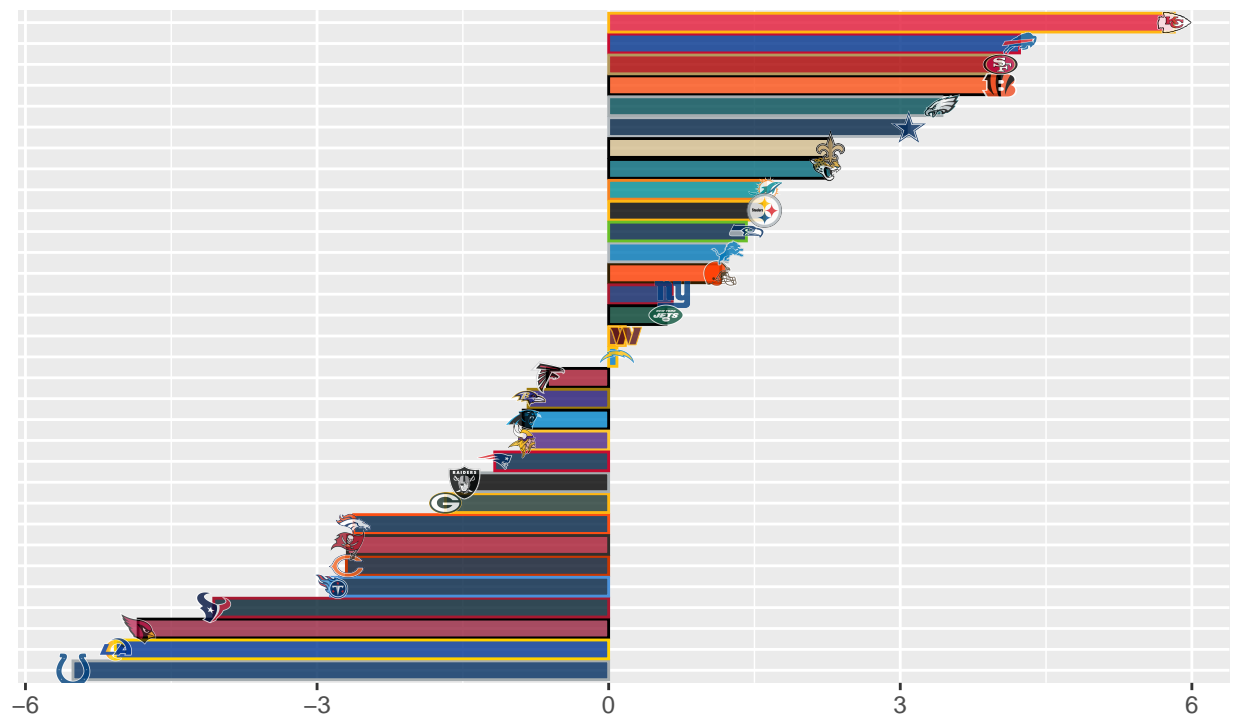
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QB Model

The final model is strictly based on QB play. I combined EPA per play and average PFF grade to create nQBR. To build this model, I used every starting quarterback's career nQBR percentile and adjusted this for a 12-point spread (between the worst and best QB). Originally, I used my college-to-pro nQBR projections for small sample or rookie QBs; however, because there are some overfitting issues within the model and rookie QBs tend to struggle, I put them all at 40th percentile – just below the worst QB Fields at ~43rd. (Note: the reason the worst starting QBs are around the 40th - 50th percentile is because backups with large enough sample sizes are included in the here as well.) Therefore, if the Cheifs with Patrick Mahomes and the Falcons with Desmond Ridder were playing each other on a neutral field, this model would have the Cheifs as a 12 point favorite.

QB NFL Power Rankings (nQBR)
Projected Spread against an Average Team | new QBs last
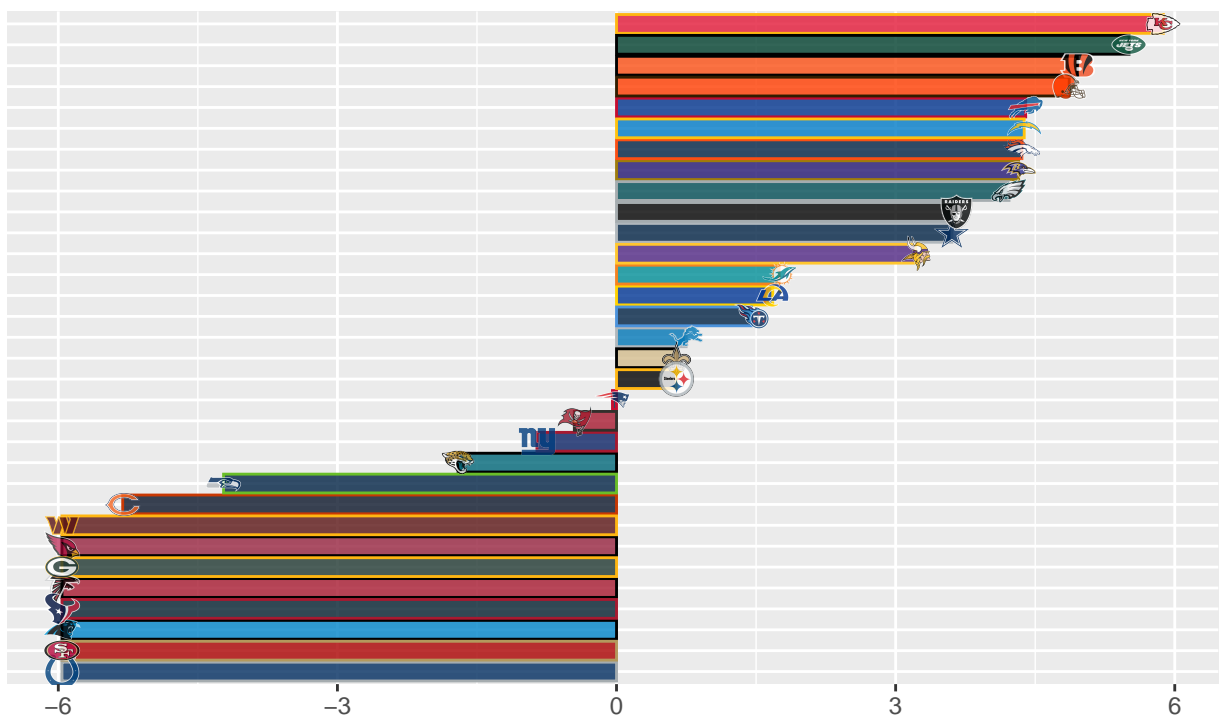
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With that being said I combined all three fo the models with 45-45-10 % weight respectively. While QB play is built into the first two models, it is primarily based of off last season's play. Adjusting for just 10% here allows this to be based off of the QBs career play instead.

Assuming a 2-point home field advantage, here are my numbers for week 1:

2023 Week 1 Matchups
Updated: 2023-09-07 09:36:43

Home	Away	Proj. Spread (Home)			DK Spread	Value[1]
		Pythagorean	EPA & SR	nQBR		
KC	DET	−4.07	−6.60	−7.13	−4.50	1.01
CLE	CIN	1.12	0.87	−1.91	2.50	1.80
BAL	HOU	−5.79	−5.23	−12.28	−10.00	−3.81
WAS	ARI	−6.16	−7.01	−2.00	−7.00	−0.87
PIT	SF	5.40	0.43	−8.60	2.00	0.24
MIN	TB	−4.37	−3.79	−5.67	−6.00	−1.76
IND	JAX	5.87	5.74	2.26	5.00	−0.45
ATL	CAR	−1.63	−2.25	−2.00	−3.50	−1.55
NO	TEN	−5.22	−7.14	−1.20	−3.00	2.68
CHI	GB	−0.57	−0.98	−2.65	−1.00	−0.04
NE	PHI	0.65	2.60	2.26	4.00	2.31
SEA	LA	−7.54	−8.49	3.90	−5.50	1.32
DEN	LV	0.90	−0.86	−2.71	−3.50	−3.25
LAC	MIA	−1.69	−0.47	−4.63	−3.00	−1.56
NYG	DAL	2.54	0.44	2.46	3.50	1.91
NYJ	BUF	2.65	1.64	−3.11	2.50	0.88

[NA]By: Sam Burch – Data @nflfastR, @cfbfastR, @pff, @unexpected_pts, & @draftkings
[1]Color indicates strength of favoring towards home team.