Fantasy Football Player Ownership

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Preface:

The goal of this project is to look at the most popular players that league winning teams had on their roster during the last 5 NFL seasons and look for trends in the types of players that gave a team the highest chance of winning their league.

Methodology:

In case you did not see my previous project where I simulated 100,000 fantasy football leagues through the last 5 NFL seasons and evaluated the most popular draft strategies, I'll link it here: https://gamedaymetrics.wixsite.com/ff-data-analytics/draft-strategies-and-simulations. The procedure of simulating these leagues is much the same in this project and if you'd like a more in-depth explanation of this procedure, you can read more about it in my previous post, but here's an extremely short summary:

- Simulated 100,000 fantasy football leagues with 12 teams with 0.5 PPR scoring with a 1 QB, 2 RB, 2 WR, 1 TE, 1 FLEX, 1 DST, 1 K, and 7 bench spot roster over the last 5 NFL seasons.

Most Valuable Draft Picks 2018-2022:

We will look at what % of teams with each player on their roster ended up winning their league. This will show which players each year were the best picks at their ADP (the most valuable draft picks of that year).

Name, win %, ADP, End of Year Ranking 2018:

- 1. James Conner: 21.39%, RB63, RB6
- George Kittle: 20.39%, TE13, TE3
 Christian McCaffrey: 20.28%, RB11, RB3
- Christian McCaπrey: 20.28%, RB11, RB3
 Patrick Mahomes II: 20.01%, QB15, QB1
- 5. Eric Ebron: 19.08%, TE16, TE4
- 6. Todd Gurley II: 18.29%, RB1, RB1
- 7. Saquon Barkley: 18.25%, RB6, RB2
- 8. James White: 16.97%, RB47, RB8
- 9. Travis Kelce: 16.35%, TE2, TE1
- 10. Tyreek Hill: 15.38%, WR10, WR1

- 1. Christian McCaffrey: 41.79%, RB3, RB1
- 2. Lamar Jackson: 23.99%, QB12, QB1

- 3. Aaron Jones: 20.32%, RB14, RB2
- 4. Austin Ekeler: 19.34%, RB30, RB6
- 5. New England Patriots DST: 17.94%, DST7, DST1
- 6. Derrick Henry: 15.72%, RB17, RB3
- 7. Austin Hooper: 15.19%, TE12, TE6
- 8. Mark Andrews: 15.14%, TE13, TE4
- 9. Cooper Kupp: 14.93%, WR21, WR4
- 10. Chris Godwin: 14.35%, WR18, WR2

- 1. Alvin Kamara: 22.18%, RB5, RB1
- 2. Justin Jefferson: 21.26%, WR49, WR6
- 3. Derrick Henry: 21.07%, RB6, RB2
- 4. Dalvin Cook: 17.77%, RB4, RB3
- 5. Darren Waller: 17.67%, TE5, TE2
- 6. Travis Kelce: 17.03%, TE1, TE1
- 7. Stefon Diggs: 16.84%, WR27, WR3
- 8. Jonathan Taylor: 16.77%, RB18, RB6
- 9. Josh Allen: 16.32%, QB9, QB1
- 10. David Montgomery: 16.14%, RB29, RB4

2021:

- 1. Cooper Kupp: 30.17%, WR17, WR1
- 2. Jonathan Taylor: 26.38%, RB8, RB1
- 3. Deebo Samuel: 22.47%, WR34, WR2
- 4. Mark Andrews: 17.70%, TE5, TE1
- 5. Ja'Marr Chase: 17.57%, WR28, WR5
- 6. Leonard Fournette: 16.76%, RB32, RB7
- 7. Austin Ekeler: 16.39%, RB10, RB2
- 8. James Conner: 15.64%, RB36, RB5
- 9. Dallas Cowboys DST: 15.03%, DST20, DST1
- 10. Joe Mixon: 14.91%, RB13, RB3

- 1. Josh Jacobs: 27.18%, RB22, RB3
- 2. Patrick Mahomes II: 19.05%, QB2, QB1
- 3. Tony Pollard: 18.66%, RB34, RB7
- 4. Jamaal Williams: 17.49%, RB57, RB8
- 5. Jalen Hurts: 17.42%, QB7, QB3
- 6. New England Patriots DST: 16.76%, DST14, DST1
- 7. Justin Fields: 16.54%, QB17, QB6
- 8. Travis Kelce: 16.11%, TE1, TE1
- 9. Austin Ekeler: 15.46%, RB3, RB1
- 10. Justin Jefferson: 15.3%, WR2, WR1

Most Valuable NFL Players over last 5 years

Highest Win % over last 5 NFL Seasons (or over NFL career if less than 5 years played):

Christian McCaffrey: 16.02%
 Justin Jefferson: 15.94%

3. Jonathan Taylor: 15.25%

Jalen Hurts: 14.19%
 Travis Kelce: 13.87%
 Josh Allen: 13.66%
 Austin Ekeler: 13.56%

Amon-Ra St. Brown: 13.32%
 Kenneth Walker III: 13.21%
 Cooper Kupp: 13.13%

Most Consistently Outperforming ADP over last 5 years

Most Seasons with an increase in win % over league average (and their average win %):

1. Travis Kelce: 5 seasons, 13.87%

2. New England Patriots DST: 5 seasons, 12.92%

3. Matt Prater: 5 seasons, 9.55%

4. Josh Allen: 4 seasons, 13.66%

5. Austin Ekeler: 4 seasons, 13.56%

6. Derrick Henry: 4 seasons, 12.99%

7. Tyreek Hill: 4 seasons, 11.84%

8. Davante Adams: 4 seasons, 11.30%

9. Tyler Lockett: 4 seasons, 11.02%

10. Kirk Cousins: 4 seasons, 10.21%

11. Chris Godwin: 4 seasons, 9.89%

12. Pittsburgh Steelers DST: 4 seasons, 9.77%

13. Melvin Gordon III: 4 seasons, 8.67%

14. Baltimore Ravens DST: 4 seasons, 8.47%

15. Robbie Gould: 4 seasons, 8.21%

Main Takeaways from Data

The win % of a player is the percent chance a team had of winning their league if they drafted that player. For example, in 2022 27.18% of teams that drafted Josh Jacobs won their league. For a 12 team league, the average win % for a player is 8.33%. Any player above a win % of 8.33% "outperformed" their ADP and any player below 8.33% "underperformed" their ADP.

- The overall RB1 was in the top 10 each season and having the RB1 more than doubled your chances of winning your league in every year except 2022 (1.86x as likely).
- There were 23 RBs, but only 9 WRs in the top 10 most valuable players from 2018-2022. This means that drafting one of the top RBs that outperform their ADPs is much more important to a team than drafting one of the top WRs of that year.

- Each year there was at least one TE in the top 10 win % players and in every year except 2019 the TE1 of the year was in the top 10 win % players (in which case both the TE4 and TE6 were, as they drastically outperformed their ADPs of 13 and 12, respectively). This shows that securing the TE is also extremely important to a team's success.
- The success of Christian McCaffrey and Travis Kelce over the last 5 years has been spectacular. McCaffrey has won 16.02% of leagues he has been drafted in, almost double the average player's, and Travis Kelce has outperformed his ADP in each of the last 5 NFL seasons.
- The New England Patriots DST has been the best defense in fantasy football over the last 5 years as it has made the top 10 win % players twice and has outperformed their ADP every year.

Year-By-Year Top 10 win % by Position (players must be drafted in at least 1% of leagues to be eligible):

QB	RB	WR
 Patrick Mahomes II: 20.01%, QB15, QB1 Matt Ryan: 12.76%, QB13, QB2 Drew Brees: 12.09%, QB6, QB8 Ben Roethlisberger: 11.65%, QB14, QB3 Mitch Trubisky: 11.53%, QB22, 	 James Conner: 21.39%, RB63, RB6 Christian McCaffrey: 20.28%, RB11, RB3 Todd Gurley II: 18.29%, RB1, RB1 Saquon Barkley: 18.25%, RB6, RB2 	 Tyreek Hill: 15.38%, WR10, WR1 Robert Woods: 14.12%, WR36, WR10 JuJu Smith-Schuster: 13.10%, WR17, WR9 Tyler Lockett: 12.65%, WR53, WR15 Mike Williams: 12.07%, WR57,
 Mitch Trubisky: 11.53%, QB22, QB15 Deshaun Watson: 11.28%, QB2, QB4 Jared Goff: 10.85%, QB16, QB7 Dak Prescott: 10.45%, QB20, QB10 Andrew Luck: 10.24%, QB9, QB5 Russell Wilson: 9.19%, QB4, QB9 	 James White: 16.97%, RB47, RB8 Alvin Kamara: 14.56%, RB5, RB4 Tarik Cohen: 13.86%, RB34, RB13 Nick Chubb: 13.63%, RB38, RB16 Chris Carson: 13.38%, RB36, RB15 Marlon Mack: 13.12%, RB33, RB21 	 Mike Williams: 12.07%, WR57, WR24 Davante Adams: 11.93%, WR7, WR3 Adam Thielen: 11.89%, WR13, WR7 Chris Godwin: 11.68%, WR63, WR25 Julian Edelman: 11.41%, WR30, WR22 DeSean Jackson: 10.91%, WR66, WR37

TE	DST	К
 George Kittle: 20.39%, TE13, TE3 Eric Ebron: 19.08%, TE16, TE4 Travis Kelce: 16.35%, TE2, TE1 Zach Ertz: 14.92%, TE3, TE2 Austin Hooper: 11.33%, TE18, TE6 O.J. Howard: 10.38%, TE15, TE13 Vance McDonald: 8.69%, TE25, TE10 Trey Burton: 8.55%, TE9, TE7 Evan Engram: 8.44%, TE6, TE12 Kyle Rudolph: 8.35%, TE8, TE8 	 Chicago Bears DST: 14.27%, DST10, DST1 Los Angeles Rams DST: 9.86%, DST2, DST2 New England Patriots DST: 9.67%, DST13, DST4 Pittsburgh Steelers DST: 8.84%, DST14, DST12 Houston Texans DST: 8.60%, DST6, DST3 Baltimore Ravens DST: 8.58%, DST7, DST6 New Orleans Saints DST: 8.55%, DST9, DST14 Minnesota Vikings DST: 8.24%, DST3, DST8 Arizona Cardinals DST: 8.02%, DST16, DST19 Denver Broncos DST: 7.84%, DST8, DST5 	 Ka'imi Fairbairn: 12.15%, K18, K1 Mason Crosby: 10.59%, K10, K6 Justin Tucker: 10.02%, K3, K2 Robbie Gould: 9.43%, K8, K8 Ryan Succop: 8.70%, K19, K18 Matt Prater: 8.63%, K12, K11 Wil Lutz: 8.50%, K4, K4 Harrison Butker: 8.43%, K6, K5 Matt Bryant: 8.09%, K7, K19 Josh Lambo: 8.01%, K17, K27

QB	RB	WR
 Lamar Jackson: 23.99%, QB12, QB1 Dak Prescott: 13.37%, QB17, QB2 Josh Allen: 12.33%, QB21, QB6 Russell Wilson: 11.12%, QB8, QB4 Jameis Winston: 10.81%, QB13, QB3 Kyler Murray: 10.45%, QB11, QB7 Matthew Stafford: 10.30%, QB20, QB29 Jimmy Garoppolo: 9.88%, QB22, QB14 Deshaun Watson: 9.27%, QB2, QB5 Aaron Rodgers: 9.25%, QB3, QB10 	 Christian McCaffrey: 41.79%, RB3, RB1 Aaron Jones: 20.32%, RB14, RB2 Austin Ekeler: 19.34%, RB30, RB6 Derrick Henry: 15.72%, RB17, RB3 Kenyan Drake: 12.39%, RB32, RB16 Mark Ingram II: 11.84%, RB22, RB8 Dalvin Cook: 11.8%, RB10, RB5 Ezekiel Elliott: 11.53%, RB4, RB4 Leonard Fournette: 11.16%, RB12, RB9 Miles Sanders: 11.11%, RB28, RB15 	 Cooper Kupp: 14.93%, WR21, WR4 Chris Godwin: 14.35%, WR18, WR2 Michael Gallup: 13.18%, WR46, WR22 Marvin Jones Jr.: 13.17%, WR39, WR27 Kenny Golladay: 12.70%, WR19, WR6 Courtland Sutton: 12.54%, WR44, WR19 Jamison Crowder: 11.72%, WR59, WR31 Tyler Lockett: 11.65%, WR20, WR14 Marquise Brown: 11.45%, WR67, WR46 Allen Robinson II: 11.33%, WR30, WR11

TE	DST	К
 Austin Hooper: 15.19%, TE12, TE6 Mark Andrews: 15.14%, TE13, TE4 Jared Cook: 12.45%, TE7, TE7 George Kittle: 12.41%, TE2, TE2 Jason Witten: 11.40%, TE19, TE12 Greg Olsen: 11.19%, TE14, TE13 Jimmy Graham: 10.66%, TE18, TE21 Travis Kelce: 10.38%, TE1, TE1 Kyle Rudolph: 10.34%, TE17, TE14 Tyler Eifert: 9.83%, TE21, TE20 	 New England Patriots DST: 17.94%, DST7, DST1 Pittsburgh Steelers DST: 13.90%, DST21, DST2 Kansas City Chiefs DST: 10.98%, DST20, DST5 Atlanta Falcons DST: 9.58%, DST14, DST21 Baltimore Ravens DST: 9.21%, DST5, DST4 Los Angeles Rams DST: 9.10%, DST2, DST6 New Orleans Saints DST: 8.95%, DST18, DST8 Green Bay Packers DST: 8.92%, DST12, DST16 Carolina Panthers DST: 8.60%, DST11, DST22 Seattle Seahawks DST: 8.45%, DST16, DST14 	 Matt Prater: 13.22%, K14, K7 Chris Boswell: 11.68%, K17, K11 Brett Maher: 11.24%, K15, K22 Austin Seibert: 11.15%, K13, K16 Eddy Pineiro: 11.00%, K18, K23 Jason Myers: 10.57%, K16, K14 Harrison Butker: 10.22%, K3, K1 Jake Elliott: 10.19%, K12, K20 Justin Tucker: 9.07%, K2, K3 Robbie Gould: 8.52%, K7, K15

QB	RB	WR
 Josh Allen: 16.32%, QB9, QB1 Aaron Rodgers: 15.25%, QB10, QB3 Ryan Tannehill: 15.07%, QB20, QB7 Tom Brady: 13.03%, QB11, QB8 Kyler Murray: 12.78%, QB5, QB2 Kirk Cousins: 11.81%, QB25, QB11 Deshaun Watson: 10.80%, QB6, QB5 Russell Wilson: 10.68%, QB4, QB6 Cam Newton: 9.06%, QB19, QB16 Baker Mayfield: 8.86%, QB17, QB17 	 Alvin Kamara: 22.18%, RB5, RB1 Derrick Henry: 21.07%, RB6, RB2 Dalvin Cook: 17.77%, RB4, RB3 Jonathan Taylor: 16.77%, RB18, RB6 David Montgomery: 16.14%, RB29, RB4 Antonio Gibson: 12.78%, RB44, RB12 Nyheim Hines: 12.76%, RB57, RB20 Jamaal Williams: 11.91%, RB66, RB39 Aaron Jones: 11.49%, RB13, RB5 Kareem Hunt: 10.72%, RB28, RB10 	 Justin Jefferson: 21.26%, WR49, WR6 Stefon Diggs: 16.84%, WR27, WR3 Davante Adams: 15.74%, WR2, WR1 Calvin Ridley: 14.31%, WR17, WR4 Marvin Jones Jr.: 13.24%, WR37, WR17 A.J. Brown: 13.19%, WR15, WR11 Brandin Cooks: 13.14%, WR36, WR15 Tyreek Hill: 12.8%, WR3, WR2 Curtis Samuel: 12.42%, WR66, WR25 Jamison Crowder: 11.94%, WR42, WR39

TE	DST	К
 Darren Waller: 17.67%, TE5, TE2 Travis Kelce: 17.03%, TE1, TE1 Jonnu Smith: 11.99%, TE16, TE10 Jimmy Graham: 11.96%, TE20, TE11 Mike Gesicki: 11.89%, TE14, TE7 T.J. Hockenson: 11.56%, TE15, TE4 Eric Ebron: 10.24%, TE18, TE15 Noah Fant: 9.23%, TE13, TE12 Rob Gronkowski: 8.41%, TE8, TE8 Hayden Hurst: 8.31%, TE11, TE9 	 Los Angeles Rams DST: 13.15%, DST11, DST1 New Orleans Saints DST: 11.14%, DST8, DST7 Washington Commanders DST: 10.43%, DST18, DST6 Baltimore Ravens DST: 10.38%, DST3, DST5 Pittsburgh Steelers DST: 10.29%, DST2, DST2 Kansas City Chiefs DST: 10.14%, DST9, DST12 New England Patriots DST: 8.74%, DST6, DST11 Tampa Bay Buccaneers DST: 7.61%, DST12, DST8 Los Angeles Chargers DST: 7.13%, DST10, DST23 Chicago Bears DST: 6.95%, DST5, DST19 	 Younghoe Koo: 11.75%, K8, K2 Ka'imi Fairbairn: 11.44%, K10, K15 Jason Sanders: 10.89%, K15, K1 Brandon McManus: 10.12%, K18, K11 Zane Gonzalez: 10.06%, K7, K27 Michael Badgley: 9.38%, K11, K20 Matt Gay: 9.01%, K9, K30 Greg Zuerlein: 8.49%, K4, K5 Matt Prater: 8.38%, K6, K22 Mason Crosby: 7.74%, K12, K19

QB	RB	WR
 Josh Allen: 14.66%, QB2, QB1 Justin Herbert: 14.3%, QB8, QB2 Tom Brady: 14.14%, QB9, QB3 Joe Burrow: 13.14%, QB13, QB8 Jalen Hurts: 10.96%, QB11, QB9 Kirk Cousins: 10.48%, QB20, QB11 Aaron Rodgers: 10.28%, QB7, QB6 Matthew Stafford: 9.79%, QB10, QB5 Mac Jones: 8.54%, QB19, QB18 Matt Ryan: 8.51%, QB16, QB20 	 Jonathan Taylor: 26.38%, RB8, RB1 Leonard Fournette: 16.76%, RB32, RB7 Austin Ekeler: 16.39%, RB10, RB2 James Conner: 15.64%, RB36, RB5 Joe Mixon: 14.91%, RB13, RB3 Darrel Williams: 14.13%, RB57, RB22 Najee Harris: 13.29%, RB11, RB4 Damien Harris: 11.93%, RB25, RB13 Devin Singletary: 11.21%, RB38, RB20 Javonte Williams: 10.28%, RB27, RB17 	 Cooper Kupp: 30.17%, WR17, WR1 Deebo Samuel: 22.47%, WR34, WR2 Ja'Marr Chase: 17.57%, WR28, WR5 Marquise Brown: 13.3%, WR54, WR23 Jaylen Waddle: 12.5%, WR44, WR16 Darnell Mooney: 12.1%, WR51, WR24 Mike Williams: 11.88%, WR47, WR10 Davante Adams: 11.73%, WR1, WR3 Justin Jefferson: 11.26%, WR7, WR4 Tee Higgins: 10.99%, WR24, WR22

TE	DST	К
 Mark Andrews: 17.70%, TE5, TE1 Zach Ertz: 12.86%, TE16, TE5 Hunter Henry: 12.69%, TE15, TE9 Rob Gronkowski: 11.27%, TE12, TE6 Pat Freiermuth: 10.07%, TE20, TE13 Travis Kelce: 9.47%, TE1, TE2 Mike Gesicki: 9.21%, TE13, TE11 Jared Cook: 9.05%, TE18, TE16 Dallas Goedert: 9.02%, TE11, TE10 Gerald Everett: 8.50%, TE17, TE20 	 Dallas Cowboys DST: 15.03%, DST20, DST1 Miami Dolphins DST: 11.55%, DST13, DST3 New England Patriots DST: 11.48%, DST10, DST2 Tennessee Titans DST: 11.18%, DST14, DST11 Kansas City Chiefs DST: 10.42%, DST12, DST8 Buffalo Bills DST: 10.26%, DST8, DST4 Chicago Bears DST: 9.68%, DST15, DST19 Arizona Cardinals DST: 9.49%, DST22, DST9 Minnesota Vikings DST: 8.49%, DST18, DST10 Indianapolis Colts DST: 8.06%, DST9, DST7 	 Daniel Carlson: 10.93%, K14, K1 Evan McPherson: 10.03%, K18, K7 Mason Crosby: 9.93%, K9, K15 Tyler Bass: 9.30%, K4, K11 Matt Prater: 9.08%, K11, K8 Brandon McManus: 8.58%, K15, K17 Robbie Gould: 8.52%, K10, K22 Justin Tucker: 8.44%, K1, K4 Greg Zuerlein: 8.21%, K5, K13 Younghoe Koo: 8.14%, K3, K18

QB	RB	WR
 Patrick Mahomes II: 19.05%, QB2, QB1 Jalen Hurts: 17.42%, QB7, QB3 Justin Fields: 16.54%, QB17, QB6 Joe Burrow: 14.09%, QB6, QB4 Trevor Lawrence: 12.77%, QB19, QB8 Kirk Cousins: 11.91%, QB15, QB7 Josh Allen: 11.35%, QB1, QB2 Tua Tagovailoa: 10.96%, QB16, QB15 Tom Brady: 7.91%, QB8, QB12 Jared Goff: 7.35%, QB27, QB10 	 Josh Jacobs: 27.18%, RB22, RB3 Tony Pollard: 18.66%, RB34, RB7 Jamaal Williams: 17.49%, RB57, RB8 Austin Ekeler: 15.46%, RB3, RB1 Miles Sanders: 14.62%, RB30, RB13 Rhamondre Stevenson: 14.13%, RB36, RB11 Kenneth Walker III: 13.21%, RB38, RB16 Christian McCaffrey: 13.%, RB2, RB2 Derrick Henry: 11.15%, RB4, RB4 Tyler Allgeier: 10.96%, RB52, RB28 	 Justin Jefferson: 15.3%, WR2, WR1 Tyreek Hill: 14.6%, WR7, WR3 A.J. Brown: 13.52%, WR11, WR5 Davante Adams: 13.41%, WR4, WR2 Amon-Ra St. Brown: 13.32%, WR25, WR8 DeVonta Smith: 13.02%, WR38, WR10 Christian Watson: 12.82%, WR67, WR35 Garrett Wilson: 12.64%, WR49, WR19 Tyler Lockett: 12.50%, WR42, WR13 Jaylen Waddle: 12.31%, WR19, WR7

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 Travis Kelce: 16.11%, TE1, TE1 T.J. Hockenson: 14.86%, TE7, TE2 Taysom Hill: 14.02%, TE19, TE5 Tyler Higbee: 11.58%, TE17, TE9 Cole Kmet: 10.44%, TE12, TE7 David Njoku: 10.29%, TE16, TE13 George Kittle: 10.13%, TE4, TE3 Pat Freiermuth: 10.10%, TE11, TE8 Mike Gesicki: 8.68%, TE13, TE23 Hayden Hurst: 8.51%, TE18, TE22 	 New England Patriots DST: 16.76%, DST14, DST1 Dallas Cowboys DST: 12.85%, DST9, DST2 Cleveland Browns DST: 9.88%, DST15, DST21 San Francisco 49ers DST: 9.87%, DST3, DST3 Pittsburgh Steelers DST: 9.29%, DST16, DST19 Green Bay Packers DST: 9.04%, DST7, DST12 Philadelphia Eagles DST: 8.72%, DST17, DST5 Baltimore Ravens DST: 8.58%, DST10, DST7 Washington Commanders DST: 8.45%, DST18, DST11 Tennessee Titans DST: 8.43%, DST19, DST25 	 Nick Folk: 10.98%, K10, K8 Daniel Carlson: 9.96%, K3, K2 Tyler Bass: 8.89%, K5, K7 Younghoe Koo: 8.86%, K7, K5 Robbie Gould: 8.45%, K8, K10 Matt Prater: 8.43%, K9, K29 Ryan Succop: 8.43%, K16, K18 Greg Zuerlein: 8.28%, K12, K12 Justin Tucker: 8.13%, K1, K1 Matt Gay: 7.91%, K6, K17