Fantasy Football Analysis

December 3, 2019

1 Butt Fumbles 2019 Yearly Analysis

The purpose of this notebook is to provide some simple analyses of this year's fantasy football league. The data that I use as input is weekly point totals for each team for the regular season (13 weeks). At this point, I don't consider finer grained data like position points per week, etc.

```
Schedule seems valid
```

```
Scores match win totals
```

1.0.1 Basic Analysis

Here, we calculate weekly averages and standard deviations for each team.

Sorted Highest Weekly Average   Sorting by average, we see a couple things:

- Lambeau Leapers scored a TON of points. Holy cow. Matt averaged 10 points more than any other team. That's the same difference as the 2nd most points (Zach Attack) and the 7th most points (THROW IT TO SANDERS). Insane regular season.
- Zach Attack, who finished with a record of 6-7, scored the 2nd most points in the league, and still missed the playoffs. More on that later! I actually feel bad for Dinesh.
- Based purely on points scored, 3 of our 4 playoff teams (Lambeau Leapers, ahh fuckin' shitdick, and Chubby Winners were in the top 4 of points. Our only playoff team not in the top 4 of points - Eat 4 Dicks Asendorf, who finished 6th.

[11]:

Team	Weekly Average	Weekly Standard Dev
Lambeau Leapers	110.093846	18.544572
Zach Attack	100.101538	22.783790
Aah Fuckin' Shitdick	99.287692	25.213765
Chubby Winners	98.126154	23.643363
Rudy Was Offsides	94.318462	20.865547
Eat 4 Dicks Asendorf	91.623077	16.794868
THROW IT TO SANDERS	90.992308	17.612305
Frank The Tank	86.903077	30.423210
Peter's Team	86.892308	23.552698
DJ Purple	84.549231	14.487028
Jbone!	84.049231	22.912075

```
Pubic Faith                    82.056923              21.747858
```

Sorted by Highest Weekly Standard Deviation   A team's weekly standard deviation gives some notion of how consistent they were week to week. A high standard deviation will indicate that some weeks your team went off and others your team was terrible. Here are some interesting highlights

- Frank The Tank wins highest standard deviation by a ton! And this might be the highest ever standard deviation. He either had the highest or lowest variance in at least 3 of the 5 Butt Fumbles seasons.
- Yours truly, DJ Purple, had the lowest standard deviation. This surprised me, but looking back I really never had any really good weeks. Never a good sign when you're #10 in points scored and last in weekly standard deviation.
- Lambeau Leapers finished with the 4th lowest standard deviation. Couple this with the crushing the weekly average shows you just how dominate he was. That big weekly average isn't because of a few monster weeks but because of consistant dominance.

```
[13]:                      Weekly Average  Weekly Standard Dev
      Team
      Frank The Tank             86.903077             30.423210
      Aah Fuckin' Shitdick       99.287692             25.213765
      Chubby Winners             98.126154             23.643363
      Peter's Team               86.892308             23.552698
      Jbone!                     84.049231             22.912075
      Zach Attack               100.101538             22.783790
      Pubic Faith                82.056923             21.747858
      Rudy Was Offsides          94.318462             20.865547
      Lambeau Leapers           110.093846             18.544572
      THROW IT TO SANDERS        90.992308             17.612305
      Eat 4 Dicks Asendorf       91.623077             16.794868
      DJ Purple                  84.549231             14.487028
```

1.0.2   Schedule Luck Analysis

Here, I calculate how lucky each team was based on the arbitrary schedule & rivalry week matchups. This is computed on a weekly basis and asks the question "What if my opponent was different this week?" The way that our league works, you are matched up with one opponent and play head-to-head against them for that week. If you score a lot of points, but end up playing the team that scored the most, that's pretty unlucky. If you score hardly any points, but end up playing the team that scored the least points, that's pretty lucky.

To compute a luck metric, I compute the expected value of your wins for each week by comparing your weekly points to every other team's points that week.

- If you scored the most points, you would beat every team that you could play and your expected win value is 1.

- If you scored the least points, you would lose to every team that you could play and your expected win value is 0.
- If your score would beat 4 teams, but lose to 7 teams, than your expected win value is 4/11

Luckiest Teams   I sort this by highest difference. A positive difference represents you were lucky and won more games than expected. A negative difference represents you were unlucky and won fewer games than expected. Some notes:

- Our luckiest team this year was Peter's Team, who won about 2 more games than expected. All that shade was warrented, but he still just missed out of the playoffs.
- Zach Attack was our least lucky team by a whopping 3 games. I did a cursory search and I'll put together the first 5 years together to calculate luck, but I'm pretty sure this is the most unlucky someone has been.

[18]:

Team	Actual Wins	Expected Wins	Difference
Peter's Team	8	5.818182	2.181818
Eat 4 Dicks Asendorf	8	6.363636	1.636364
Chubby Winners	9	7.818182	1.181818
Jbone!	6	4.909091	1.090909
Aah Fuckin' Shitdick	9	8.000000	1.000000
Rudy Was Offsides	7	6.545455	0.454545
Lambeau Leapers	10	9.545455	0.454545
THROW IT TO SANDERS	6	6.090909	-0.090909
Frank The Tank	4	5.363636	-1.363636
Pubic Faith	3	4.454545	-1.454545
DJ Purple	3	5.000000	-2.000000
Zach Attack	5	8.090909	-3.090909

Sorted Luck by Expected Wins   We want to see what the standings would look like without luck. Some takeaways:

- Interestingly, the top 4 are the same as if you sort by average points and in the same order. Again, sorry Dinesh!
- Also interesting (and not terribly surprising) this order looks similar to points scored order.
- Based on expected wins, our top 4 teams really stand out and then everyone else is pretty meh, with Pubic Faith rounding the bottom a full 1/2 game behind everyone else.

[19]:

Team	Actual Wins	Expected Wins	Difference
Lambeau Leapers	10	9.545455	0.454545
Zach Attack	5	8.090909	-3.090909
Aah Fuckin' Shitdick	9	8.000000	1.000000
Chubby Winners	9	7.818182	1.181818
Rudy Was Offsides	7	6.545455	0.454545
Eat 4 Dicks Asendorf	8	6.363636	1.636364
THROW IT TO SANDERS	6	6.090909	-0.090909

```
Peter's Team                    8      5.818182    2.181818
Frank The Tank                  4      5.363636   -1.363636
DJ Purple                       3      5.000000   -2.000000
Jbone!                          6      4.909091    1.090909
Pubic Faith                     3      4.454545   -1.454545
```

1.0.3 Team Excitement Rankings

Here I want to evaluate how exciting your season was. This will look at your average point differential, win or lose. Essentially, if you won and lost games by 5 points every week, that would be way more intense & exciting than if every week was a blowout and you won or lost by 30 points.

We'll compute 4 things:

- Mean absolute difference
- Median absolute difference (might be more robust in this case)
- Number of Excited Games: I arbitrarily define this to be within 10 points
- Number of Blowout Games: I arbitrarily define this to be more than 25 points

Sort by Median Score Differential A lower differential means your weekly games were relatively close each week. Higher means your games were blowouts and not very interesting. Some notes:

- The medians and means more or less match up in terms of rankings. Median is more robust to outliers, so I'm sticking with that. Essentially you can look at this and say 6 of my games were closer than my median and 6 of my games had a larger point differential than my median.
- Chubby Winners had the most exciting year, followed pretty closely by Eat 4 Dicks Asendorf, DJ Purple, and Rudy was Offsides.
- JBone!'s median point differential was 35!!!!! That is insane! That means that 6 weeks had higher than 35 points. Crazy!
- Lambeau Leapers, as expected also had a huge number here as he crushed most of his opponents (more in a second)
- I don't know what to make of Peter's Team having a high number here. Considering he was the luckiest team, I expected him to have closer matches, but this also matches his 4th highest weekly standard deviation. Either he was good or bad.

```
[25]:                      Mean Score Diff  Median Score Diff  Number Close Games  \
     Chubby Winners             20.253846              16.92                   5
     Eat 4 Dicks Asendorf       19.315385              17.94                   5
     DJ Purple                  19.636923              19.56                   5
     Rudy Was Offsides          22.826154              19.82                   5
     THROW IT TO SANDERS        23.692308              22.28                   3
     Frank The Tank             31.776923              23.00                   3
     Aah Fuckin' Shitdick       27.353846              23.10                   0
     Zach Attack                28.055385              23.90                   1
     Pubic Faith                28.703077              24.48                   1
     Peter's Team               26.263077              29.60                   3
```

```
Lambeau Leapers            31.000000          31.02                0
Jbone!                     29.812308          35.78                5


                       Number Blowouts
Chubby Winners                        5
Eat 4 Dicks Asendorf                  5
DJ Purple                             3
Rudy Was Offsides                     6
THROW IT TO SANDERS                   6
Frank The Tank                        6
Aah Fuckin' Shitdick                  4
Zach Attack                           5
Pubic Faith                           6
Peter's Team                          7
Lambeau Leapers                       8
Jbone!                                7
```

Sort by Number of Close Games   I defined these as games where the final score was within 10 points. To me, that's the difference between maybe swapping out a bench player who could have played better that week. Some notes:

- Lambeau Leapers and ahh fuckin' shitdick had no games within 10 points. Crazy!
- With as unlucky as Zach Attack was, he only had 1 (!!!) game within 10 points.
- We had 5 teams with 5 games within 10 points.

```
[26]:                      Mean Score Diff  Median Score Diff  Number Close Games  \
DJ Purple                       19.636923              19.56                   5
Eat 4 Dicks Asendorf            19.315385              17.94                   5
Jbone!                          29.812308              35.78                   5
Chubby Winners                  20.253846              16.92                   5
Rudy Was Offsides               22.826154              19.82                   5
Peter's Team                    26.263077              29.60                   3
THROW IT TO SANDERS             23.692308              22.28                   3
Frank The Tank                  31.776923              23.00                   3
Pubic Faith                     28.703077              24.48                   1
Zach Attack                     28.055385              23.90                   1
Aah Fuckin' Shitdick            27.353846              23.10                   0
Lambeau Leapers                 31.000000              31.02                   0


                       Number Blowouts
DJ Purple                             3
Eat 4 Dicks Asendorf                  5
Jbone!                                7
Chubby Winners                        5
Rudy Was Offsides                     6
Peter's Team                          7
THROW IT TO SANDERS                   6
```

```
Frank The Tank                 6
Pubic Faith                    6
Zach Attack                    5
Aah Fuckin' Shitdick           4
Lambeau Leapers                8
```

Sort by Number of Blowouts   I defined these as games where the final score was more than 25 points apart. To me, this probably meant that there were no bench/substitution mistakes and that no matter what, the winner was foregone pretty quickly. Some notes:

- Lambeau Leapers had 8 blowouts! Likely all his doing :) Just domination. That's crazy to think about. Not only was he winning, but just dominating.
- Peter's Team was second with 7, which surprised me a little. Either his team was great and crushed someone or his team laid an egg.
- Least number of blowouts goes to me, DJ Purple - also surprising. I had the lowest variance so really I think this means that I was somewhat competitive but still generally bad.

[38]:

	Mean Score Diff	Median Score Diff	Number Close Games \
Lambeau Leapers	32.283333	31.29	0
Peter's Team	26.508333	29.79	3
Jbone!	27.930000	29.58	4
THROW IT TO SANDERS	25.051667	24.18	2
Pubic Faith	26.855000	23.67	0
Frank The Tank	29.685000	22.64	3
Chubby Winners	21.326667	20.70	4
Rudy Was Offsides	20.115000	16.86	5
Eat 4 Dicks Asendorf	18.055000	15.15	5
Aah Fuckin' Shitdick	28.333333	23.24	0
Zach Attack	27.523333	22.92	1
DJ Purple	19.330000	18.27	5

	Number Blowouts
Lambeau Leapers	8
Peter's Team	7
Jbone!	6
THROW IT TO SANDERS	6
Pubic Faith	5
Frank The Tank	5
Chubby Winners	5
Rudy Was Offsides	5
Eat 4 Dicks Asendorf	4
Aah Fuckin' Shitdick	4
Zach Attack	4
DJ Purple	3

1.0.4 Team Luck Analysis

Here I want to evaluate a team's week-to-week variance. This is a slightly different luck analysis than the schedule analysis above. Instead of assuming that your score for the week is fixed and looking at who you played, this analysis will keep your opponent the same each week, but look at your scores for other weeks and see if you would have won. This asks the question "What if my player's schedule was different?". Again we'll compare the Expected wins to the actual wins but sort by expected wins. Some notes:

- Generally speaking the expected wins don't deviate as strongly as the other luck analysis.
- After digging into things, I think this analysis correlates to points scored against. Because this analysis keeps your opponent the same every week, if your oppoent got really lucky week after week, even your good scores wouldn't have won a bunch.
- The top 4 stay the same with an interesting exception - Peter's Team jumps into the top 4. So while Peter's matchup on a weekly basis was lucky (previous analysis showed +2 wins over expected), this analysis reveals that Peter's Team had the lowest points scored against him.
- Also interestingly, Zach Attack only finishes 6th in this analysis even though he scored 2nd most points and would have finished 2nd in the luck analysis. This is likely due to the fact that he had the 2nd most points scored against him and so while his week-to-week scores were pretty good, he likely couldn't do much to overcome the brutal schedule.
- JBone! also does really poorly here and this reveals an interesting difference between him and Zach Attack. JBone! had the highest points scored against him and Zach Attack had the 2nd most - both really close. Zack Attack gains a few wins, while JBone! loses about 2.5. JBone! scored about 15 points less per week and so we'll see his score drop pretty significantly.

[30]:

	Expected Wins	Actual Wins
Lambeau Leapers	10.153846	10
Chubby Winners	8.538462	9
Peter's Team	7.692308	8
Aah Fuckin' Shitdick	7.538462	9
Rudy Was Offsides	7.461538	7
Eat 4 Dicks Asendorf	6.846154	8
Zach Attack	6.615385	5
THROW IT TO SANDERS	5.769231	6
Frank The Tank	5.538462	4
Pubic Faith	4.000000	3
Jbone!	3.615385	6
DJ Purple	3.461538	3