



8/25/17

PACS uses two separate algorithms for establishing Skill Levels for PACS players. They are independent of each other which is why players who play both (8 ball and 9 ball) will sometimes be a skill level higher or lower (and less commonly 2 skill levels different) in each discipline. Here is a brief explanation of how it works...

Each player's performance is evaluated on three rolling time periods. For 8 ball, it is their last 8, 15, and 25 matches. For 9 ball, it is the last 5, 10, and 20 matches. They are assigned a "power rank" for each of those periods. The power rank of a player DOES take into consideration the skill levels of their opponents. The largest determinant in the assignment of a player's "power rank" is match wins and losses for 8 ball. For 9 ball, the largest determinant is "Match Points" per match. After all, that's what determines if a team makes postseason or not. Players who think that by intentionally getting their innings (turns) in, it will help in keeping their skill level down.....they are wasting their and everyone else's time. Over an EXTENDED amount of time, match wins and losses are a much more important data point than innings. A win vs a loss is concrete while determining whether a shot was a "miss" or a "safety" is subject to interpretation by the scorekeeper. Every time a player plays a match (assuming they have played at least 25 matches in their PACS history), they are adding 1 match (the match just played) and subtracting 1 match (the match that occurred 9, 16, and 26 matches ago) in their new power rank. The algorithm is created so that when a player's power rank deviates by more than 1/4 point in either direction from their current skill level in **ALL THREE of the rolling periods**, it sets up a trigger to tell me that the person should move up or down in skill level. For example ...

Assume that a player is a "4.0" skill level in 8 ball. Assume that they have been shooting very well of late and are winning most of their matches. Assume that the algorithm is saying that their power ranks in the three rolling periods are

8 match power rank.....5.67 (a good "5.5")

15 match power rank...4.96 (about an average "5.0")

25 match power rank...4.23 (very strong "4.0")

What that is telling me is that if I look at the player's most recent 8 and 15 matches, they should not be a "4.0". But if I look at their most recent 25 matches, they are a 4.0 (because the 25 match power rank is less than 4.25)...albeit a very strong "4.0".

But it doesn't end there. Every player also has a tournament power rank and a non-tournament power rank. Tournament power rank includes any match that was played in postseason....therefore a play-in match would be considered a tournament match. When I am entering the person's stats every week, the very first thing I look at is the difference between their tournament power rank and their non-tournament power rank. The number (the difference) is even shaded in various shades of red and green so that it jumps off the page at me. No digging required, it's right there. If any player thinks that I don't know that they have had a large degree of success in tournaments compared to their non-tournament record, they are sadly mistaken. Once a player has a statistically significant number of postseason matches under their belt, it becomes an increasingly more important component in the evaluation of their skill level.

The algorithm also has tools that measure volatility and looks for suspicious patterns in a player or teams numbers. When I see numerous things for a player or a team that seem suspicious and unlikely to occur, I do also take that into consideration. Every player should have some volatility in their game. We are not robots. Losing streaks and winning streaks should occur and are more common than not unless you are the greenest of the green or playing at the highest skill level and rarely lose.

Here are just a few of the things that I would look for as being suspicious...

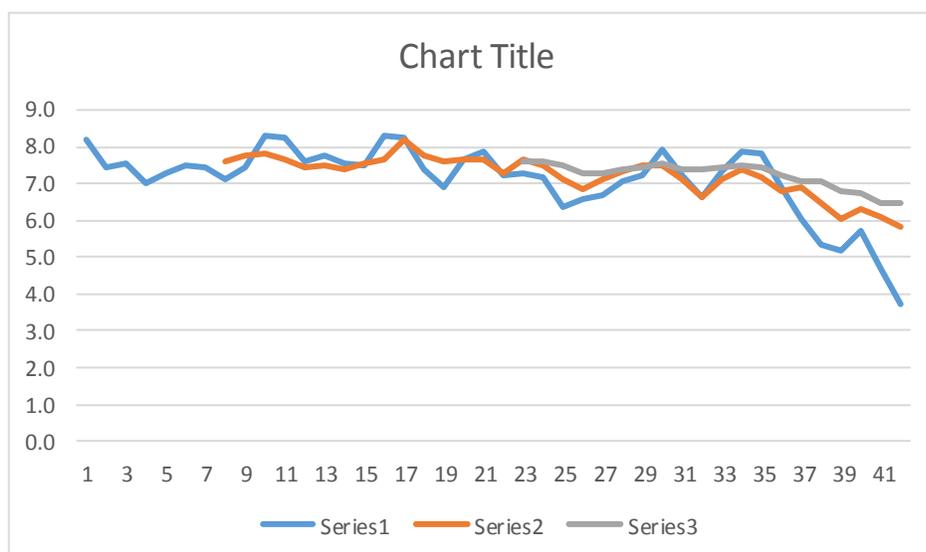
A player has very predictable patterns in their match wins and losses. A player who is very streaky in both directions ( like every time they are bumping up against a possible skill level change) or a player who wins 2, loses 2, wins 2, loses 2, etc. for eternity would both meet this criteria. If numerous players on a team show this pattern, it is even more suspicious.

A players' tournament vs non tournament power rank is light years apart. For example, if a player has played 15 tournament matches and has a power rank of 6.83 (which would indicate they shoot like a weak 7 in tournaments), but is a 4.67 (weak 5) in non-tournament play, that looks very suspicious. **MONEY (TOURNEY PERFORMANCE) TALKS**

A TEAMS tournament vs non tournament power rank is light years apart. For example, if a teams' average player power rank in tournament play is 5.72 (over multiple tournaments), but in non-tournament play, it is 4.33, that looks suspicious. **MONEY (TOURNEY PERFORMANCE) TALKS**

If every player on a team is very strong at their current skill level, something is amiss and I'm not doing my job. I'll do my best to see that doesn't happen.

A player who has traditionally been a very consistently strong player has a very very steep and sudden drop off as their team is heading into the Invitational. In the chart below, the 3 lines represent the players 8 (blue),15 (gold), and 25 (gray) match power rank.



It is highly unlikely that the player represented in the chart above would move down in skill level before the Invitational as it is likely that they have not been "giving it their all". If numerous players on a team have a sudden drop-off in their play right before the tournament, this will also be met with a very healthy dose of skepticism and won't work. Other leagues may not factor in statistically unlikely events in evaluation of skill levels, but PACS does. This is why the PACS handicapping system is superior to most other leagues.

I could go on, but I think you get the idea. The algorithm is a very valuable tool and I am very confident in it. Unfortunately, I have not introduced artificial intelligence into it yet, so I still have to use a bit of my own when I see suspicious behavior. I do try to give every benefit of the doubt to players or teams who might be sandbagging, but sometimes there is just too much evidence to ignore. As any prudent league operator should, I put no weight into anyone telling me "I would never sandbag". I believe that relying on numbers, tournament success, suspicious patterns and charting techniques provides a better handicapping system than rhetoric. Put another way, if it looks, walks, and quacks like a duck, it's probably a duck. If your team has had recent success at tournament(s), please don't tell me that your team is over handicapped. I won't listen. **THERE IS PROBABLY NOTHING THAT A GREAT SANDBAGGER CAN DO TO DEFLATE THEIR PAPER HANDICAP THAT I HAVEN'T THOUGHT OF.** As mentioned numerous times, the goal is to be as fair as possible to the entire league. If players or teams want preferential treatment, PACS is not the pool league for them. PACS is also not for players or teams who wish to have success as career sandbaggers. I have nothing to gain by being unfair as an operator. If it means I might lose a player or team occasionally because of my unwillingness to listen to rhetoric, I'm fine with that. My character and integrity are very important and it is much more important to the league as a whole to be fair to everyone.