Chess visualisation
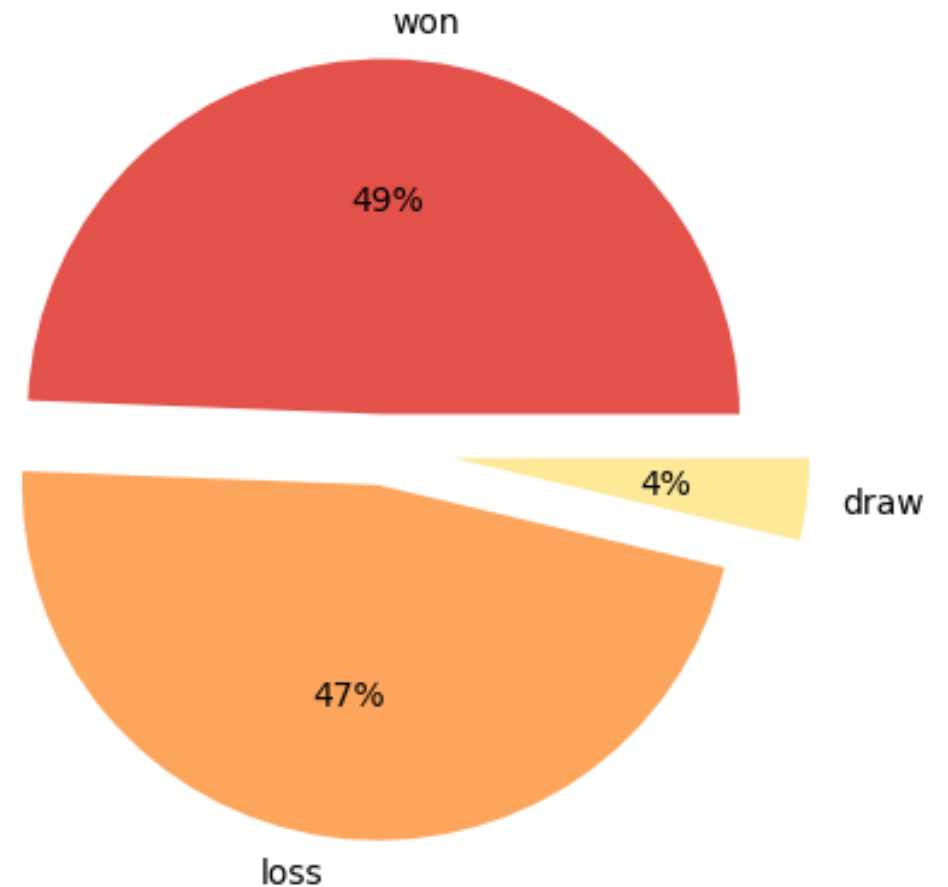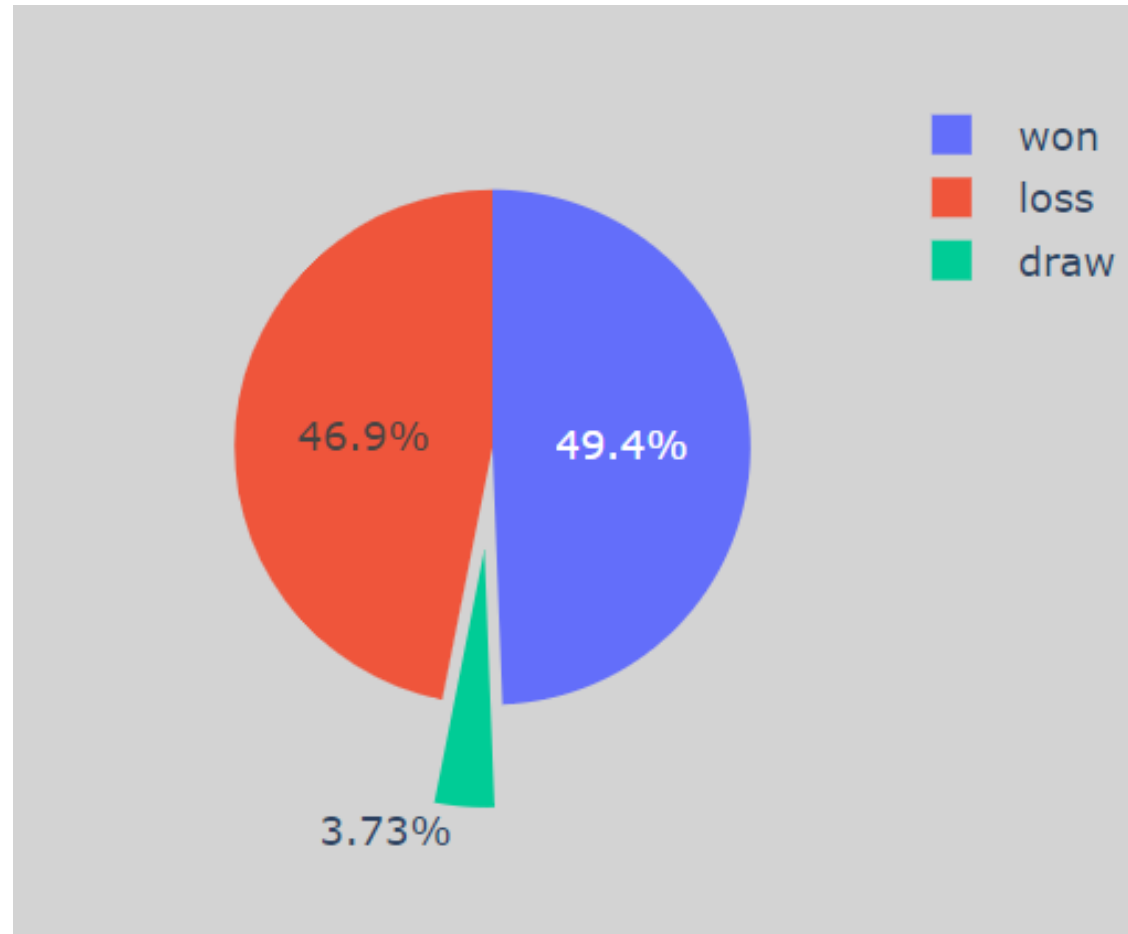
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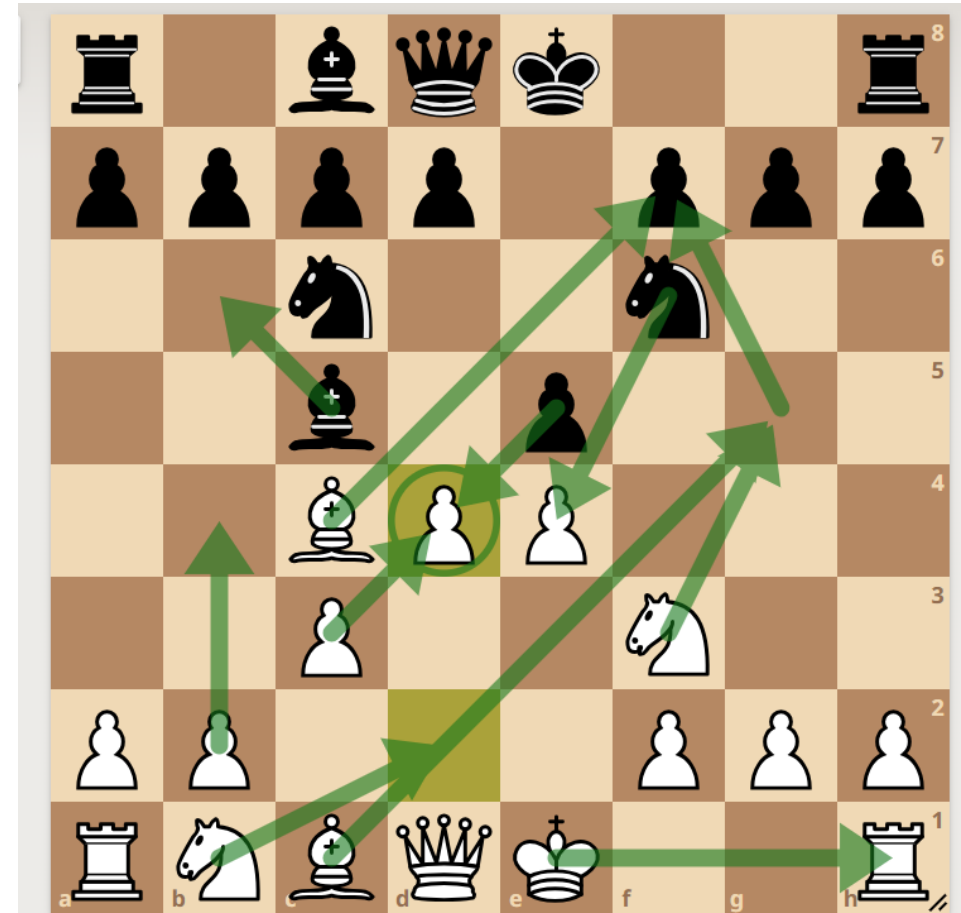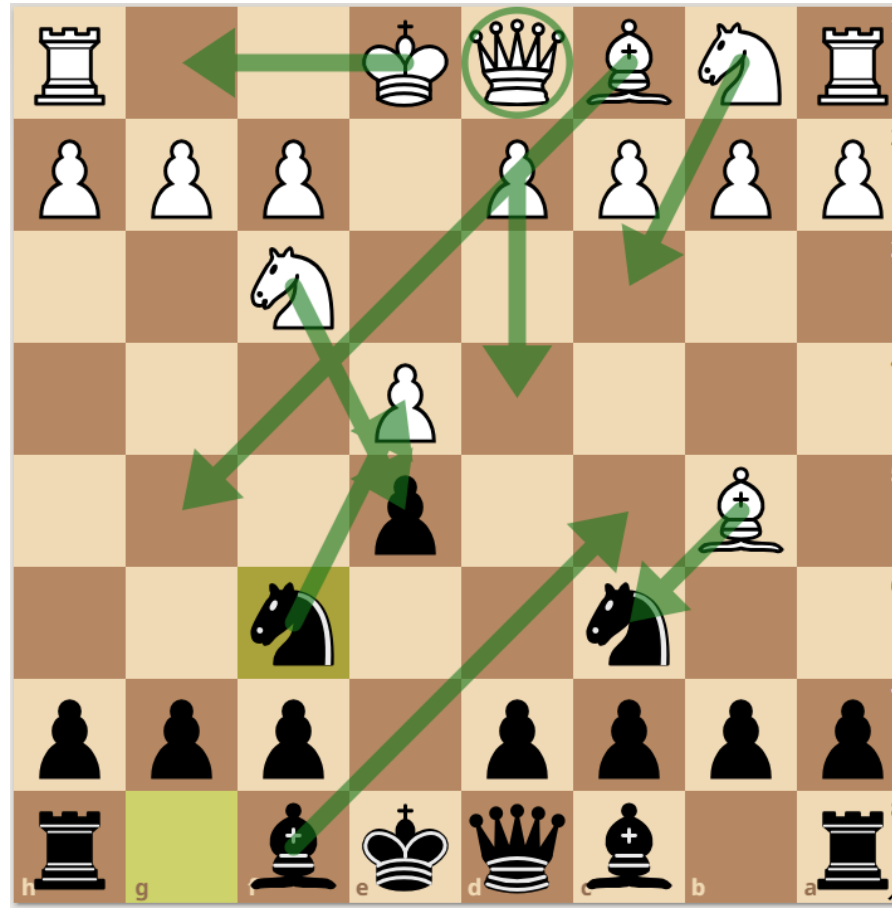
1) Win , loss and draw probabilities :

we're going to show a pie chart in 2 different ways using matplotlib and pyplot
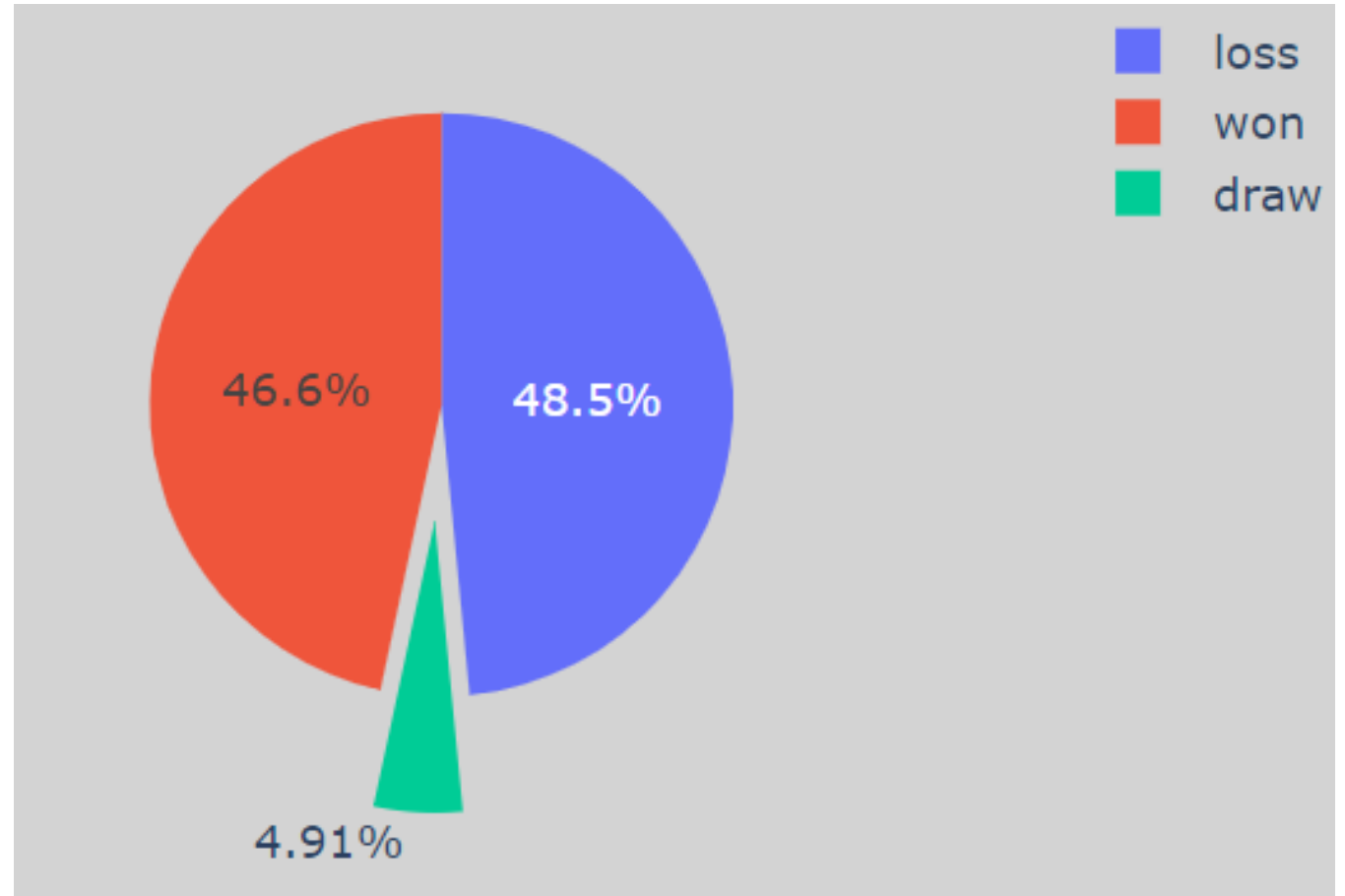
2) Color factor : playing with white or black

ofc the player with white have better chances to win cause he's ahead in developement and he can even sacrifice some pawns for way more developemnt and positional play like queens gambit and giuco piano (picture 2 on the right) but black can still draw and force it like the berlin defence (picture 1 on the left) which is usually draw and even win for being extra agressive like dutch defence or kings indian
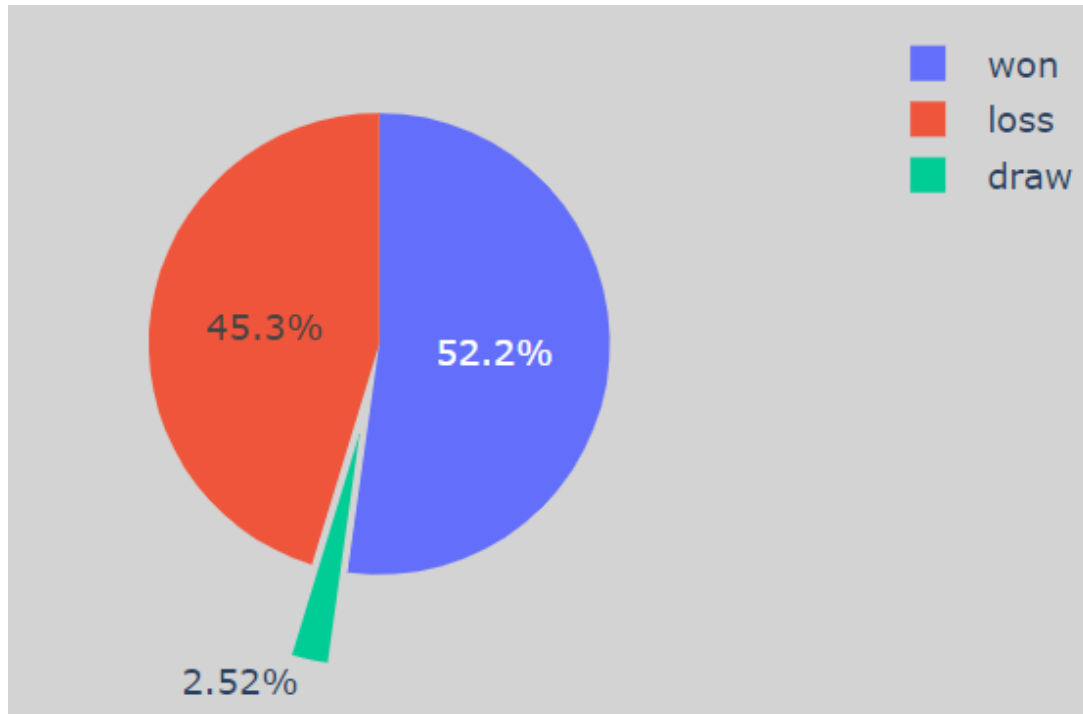
2.1) As Black :

- We can see that the average player would lose more than he would win (we ignored openings and ELO difference here we're going to talk about them later)
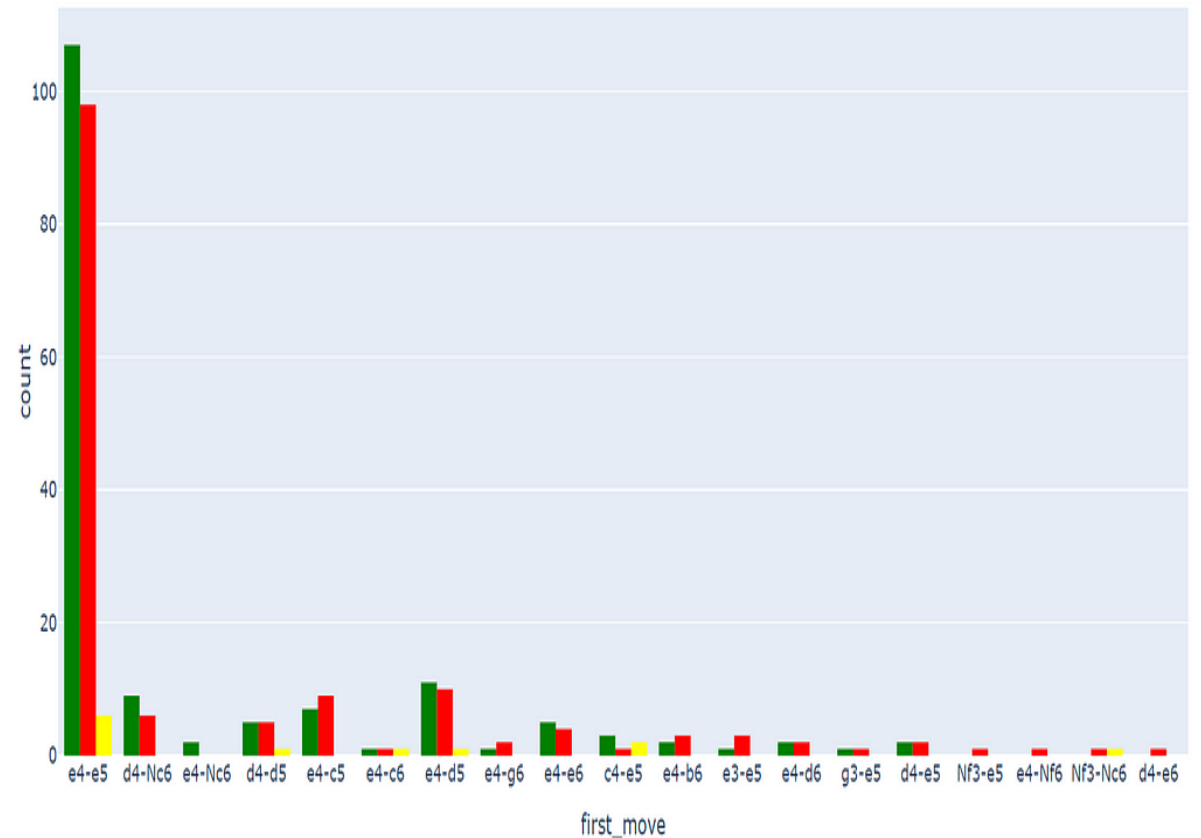
2.2) As White

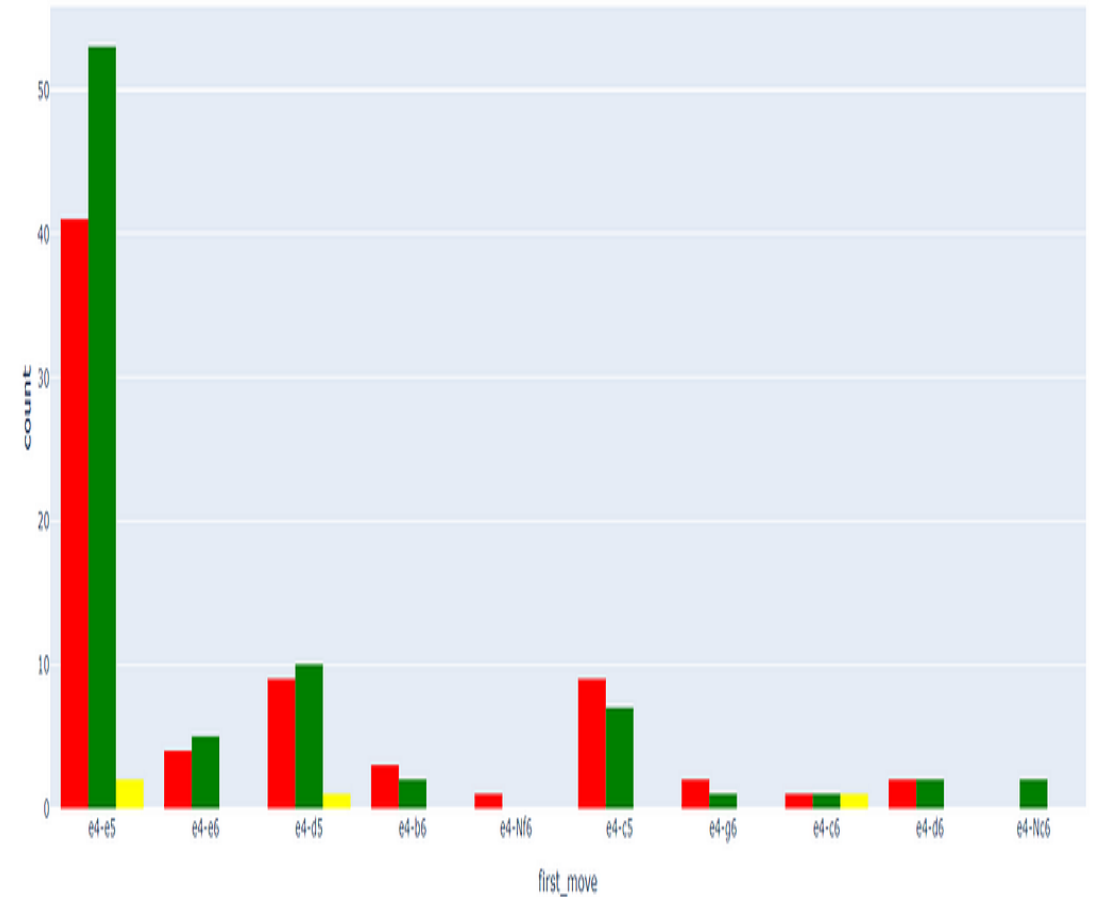- As we can see , white have more chances to win and indeed won more than he lost

3) Based on first move :

- There's tons of openings each one is different and have different tactics and positional approches , ofc the efficiency is slightly different according to the engine and the most common openings are e4(italian game,ruy lopez) or d4 openings (jobava london , queens gambit)
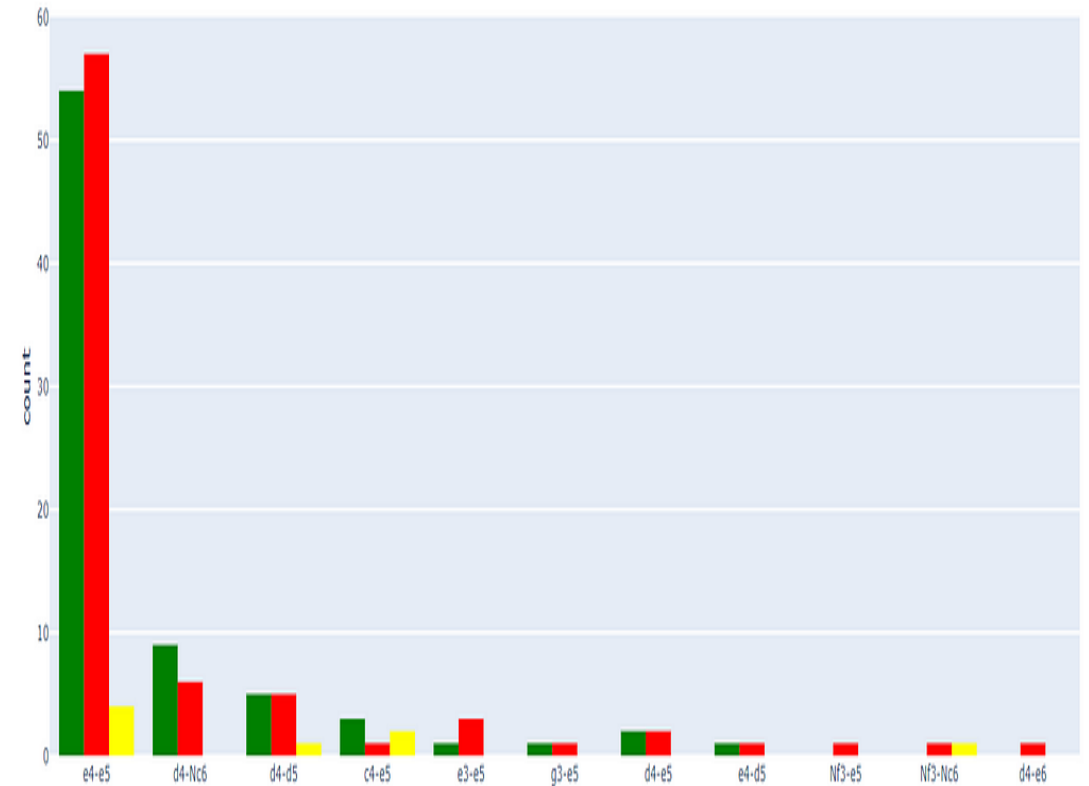
3.1) white pov :

- The average player usually plays e4 cause it's the first that he would probably learn pushing pawns to the center castle king side and develop some pieces , plus learning the full theory of the sicilian defence for example needs at least at least 3 weeks to a month which the newer players won't do and can't
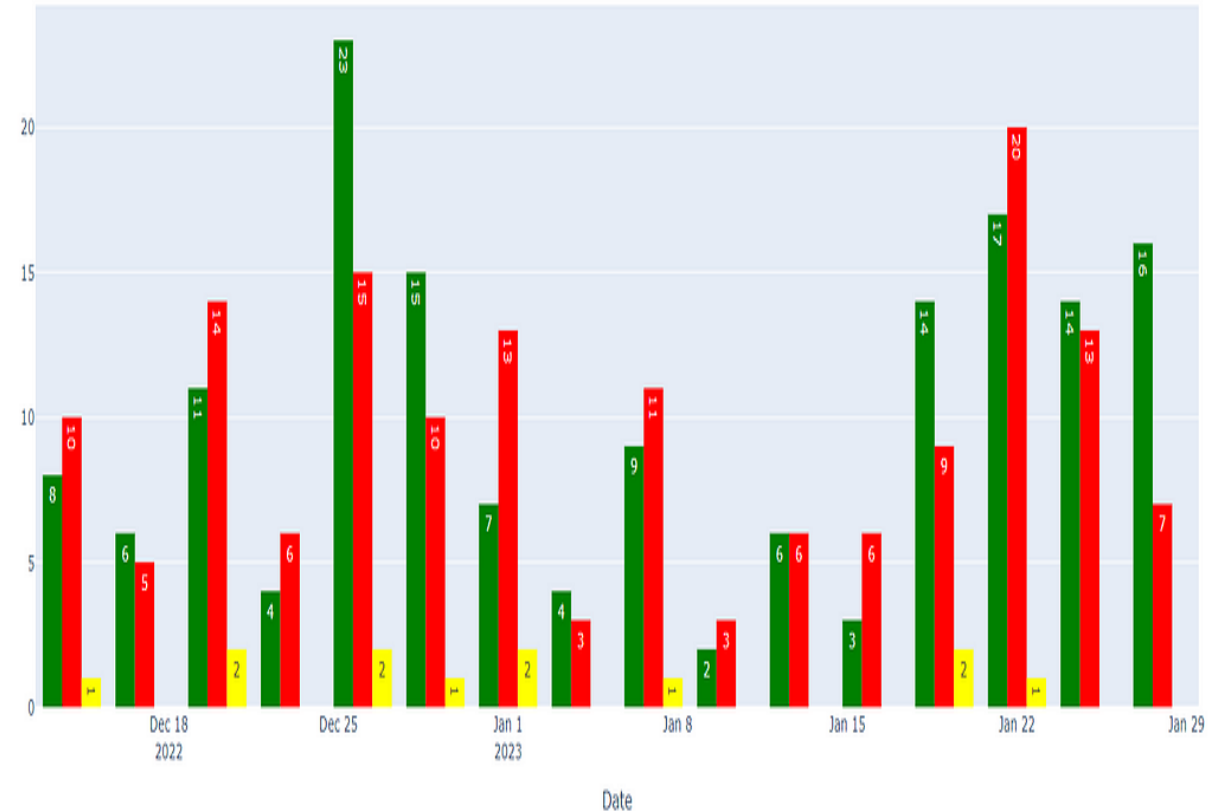
3.2) Black pov :

- E5 is the most common response to e4 ofc there's the caro cann too and ofc the sicilian defence , and then there's d4 and nc6 the kings indian defence (or nimzo indian , queens indian defnece with the double fianchetoo) my favourite opening against d4 , also e4 d5 the very interesting scandinavian defence
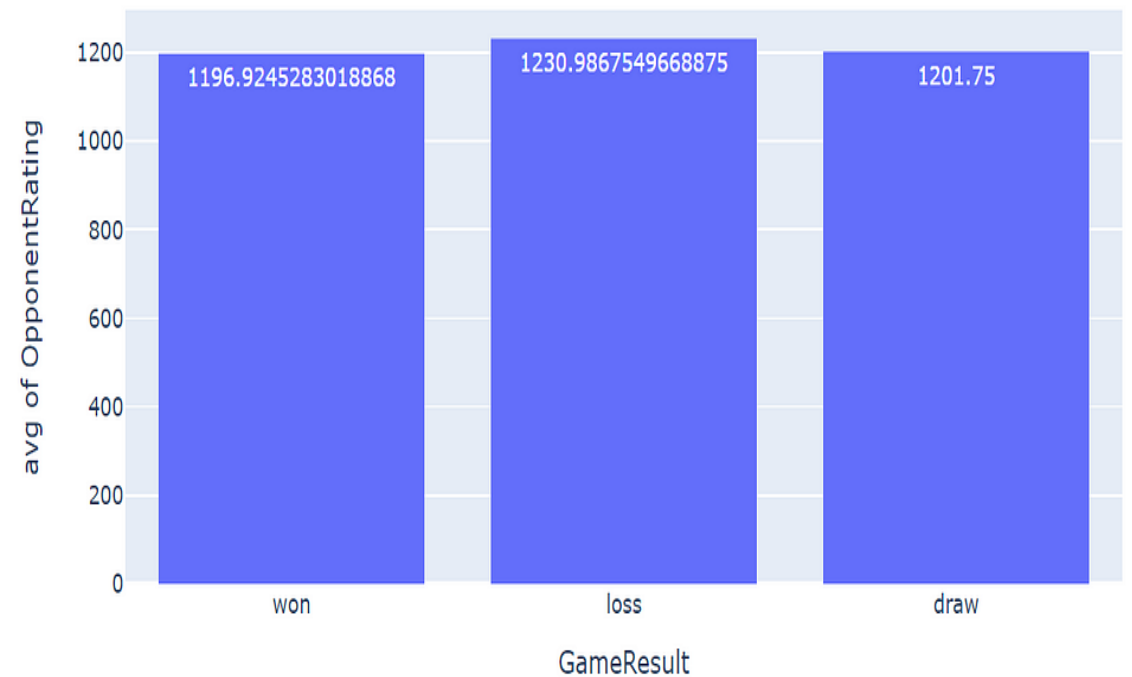
4) Based on Dates :

- 4.1) results vs dates : from december 18 to january 29 sometimes the win percentage would dominate sometimes equal sometimes not so it depends on the mood and state of mind really other factors like working can impact too

- 4.2) ELO ratings vs dates : as u can see the rating is going on a spiritual journey (chess joke) it goes up and down and that's usually the average sometimes u have a grandmaster performances sometimes u keep blundering ur pieces and u keep losing the whole night ☹
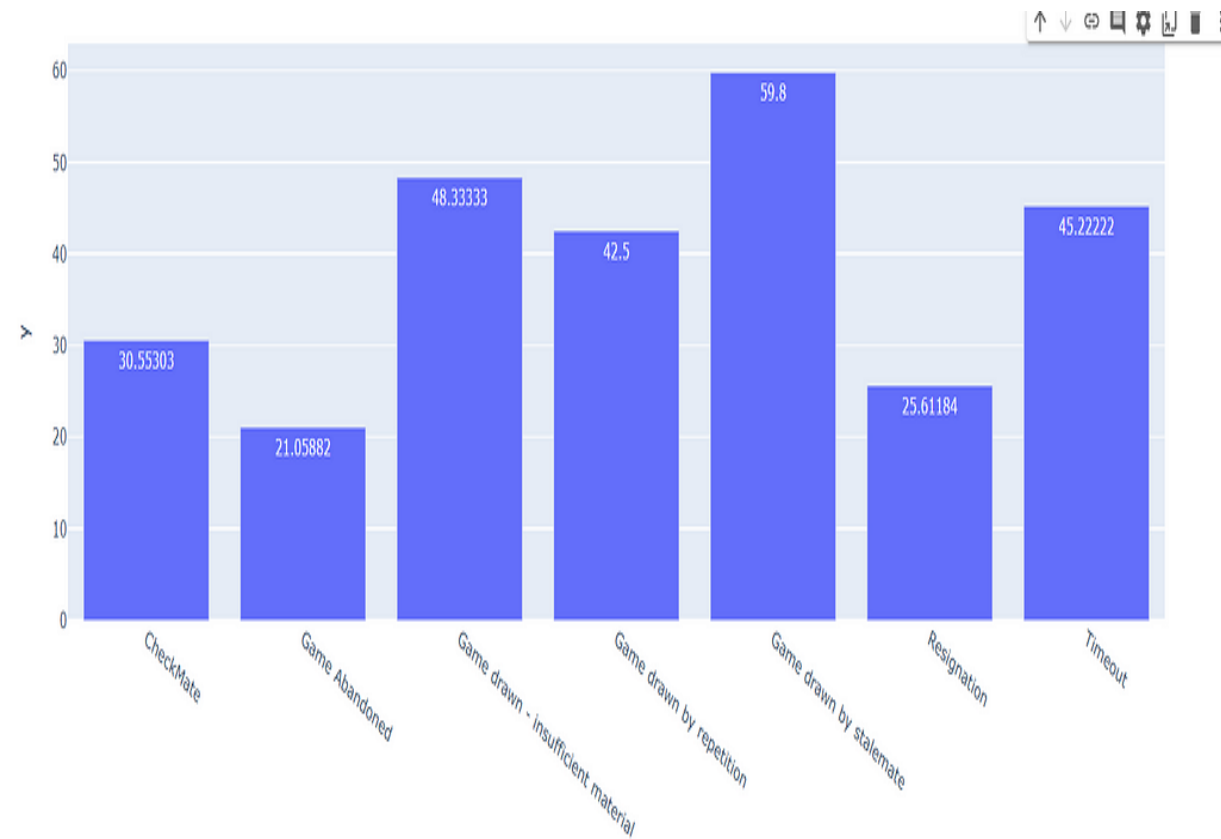
- 4.3) Opponent rating vs results : ofc it's skill based matchmaking and the players that u would face could be 100 elo higher or lower max (not tourney included) but the player with the highest elo rating usually have more chnaces to win against weaker players
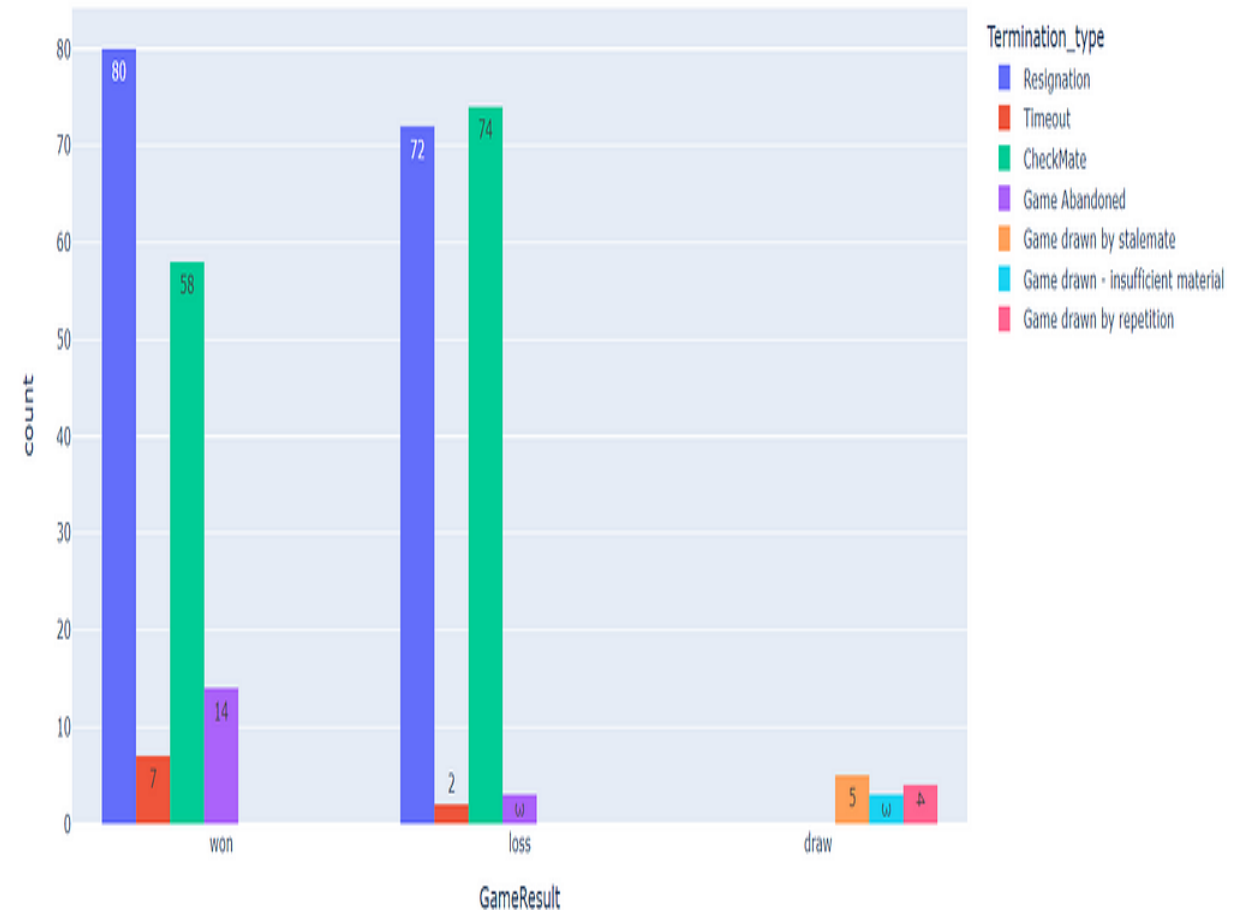
5) Move count vs how the game ended :

- Resign or game abandoned the average is 20 to 25 because it's probably mate soon the position is broken or hang a piece for free

- Checkmate in 30 moves it can go to 45 and ladder with at least a rook and king or ladder with 2 rooks at least , or a beutiful checkmate very aggressive in the middle game move 15 to 20

- A perfect game of chess with high move counts and 99% accuracy always end in a draw that's why the average is so high 48 move 42 and 60

6) Termination and results :

- Usually the opponent is going to resign or get checkmated and vice versa
- Timeout is kinda rare here so i assume it's more like a classical games than 1 min bullet games or 3 min blitz games
- Game abandoned is rare because quit raging would happen only in case of hanging important pieces or a brilliant series of moves that the opponent or u couldn't defend , or the internet is bad (in algeria)
- Ofc drawing is rare specially in the lower and intermediate levels because they don't play perfect chess and are more agressive

The end