

# Chessgame database statistics

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## Task

In this task we were given to use a file that contains 2600 chess games in a pgn format (Portable Game Notation). The objective of this assignment was to design a Python script that loads these games, perform various statistics on them, and display the results at a suitable format. This document displays some of the results that we find most useful for displaying the main functionality of the script. This means that although many of the functions have many parameters that can be changed by the user we have used parameters that showcase the functionality best. All of the data for the tables and the images used are also stored in the .zip file.

## Tables

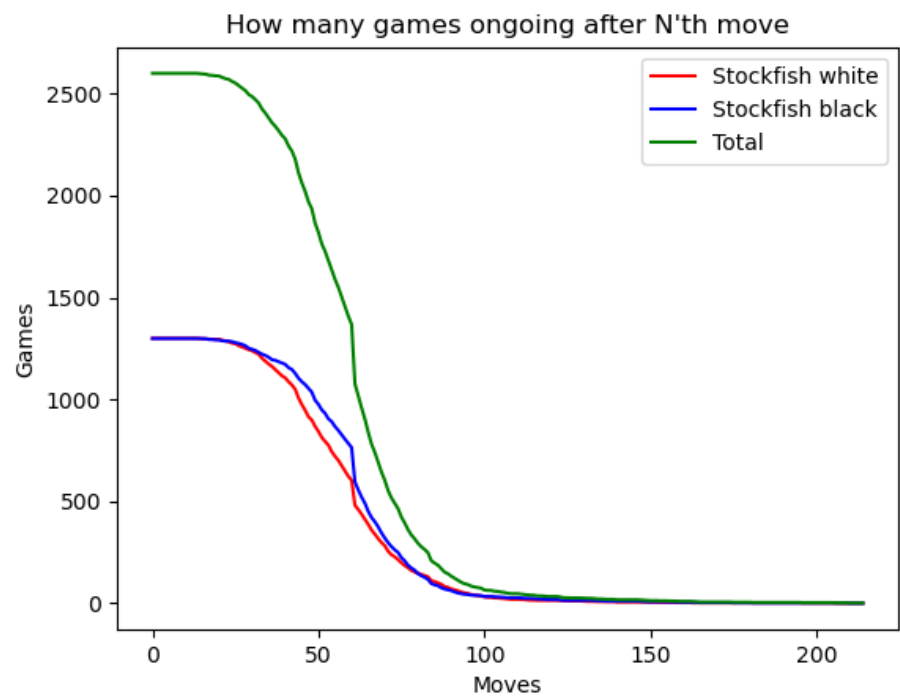
Table regarding number of games won, lost and remis by stockfish

Won	Lost	Remis
992	8	1599

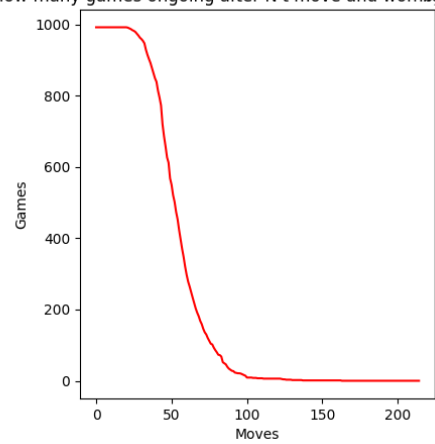
Table regarding number of games won by stockfish with white or black

Won with white	Won with black
698	300

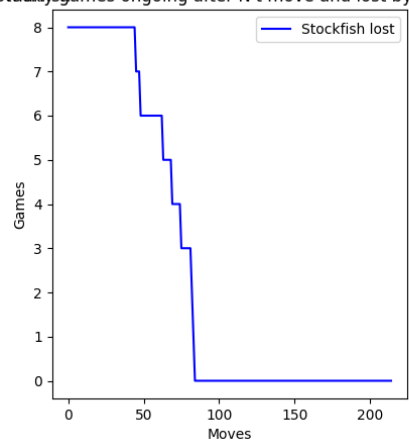
Plots



How many games ongoing after N't move and won by Stockfish



How many games ongoing after N't move and lost by Stockfish



## Tables statistics

Table regarding mean of the number of moves in a game

Mean of:	Mean
All the games in total	60.321
Games where stockfish was white	58.762
Games where stockfish was white	61.881
Games where stockfish won	55.078
Games where stockfish lost	68.625

Table regarding standard of the number of moves in a game

Standard deviation of:	Standard deviation
All the games in total	19.586
Games where stockfish was white	19.78
Games where stockfish was white	19.272
Games where stockfish won	16.673
Games where stockfish lost	15.482

Table regarding different openings played and the result in each of these. In this table we look at the openings that have been played more than 20 times

Opening	White won	Black won	Remis
Nimzo-Indian	22	13	43
Sicilian	151	89	342
QGA	7	3	20
QGD	28	9	83
Budapest	9	0	17
Queen's pawn game	17	8	44
French	42	11	77
Ruy Lopez	47	15	102
English opening	20	12	56
Gruenfeld	8	4	28
Reti opening	12	4	26
Caro-Kann	36	11	75
English	43	17	93
Queen's Indian	26	10	66
QGD semi-Slav	18	8	50
Petrov	8	0	19
King's Indian	31	7	47
Catalan	10	0	20
Sicilian defence	13	2	19
Reti	9	8	21
Robatsch (modern) defence	7	8	8
QGD Slav	12	4	36

## Trees

Trees for two different openings with two different depths.

