Computer Science NEA - Chess Engine

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Chapter 1

Analysis of the problem

1.1 Problem Identification

The game of chess has skyrocketed in terms of popularity recently, so much so that half of my school now spend their break times playing each other on `chess.com`. Chess is a strategy board game with the end goal being to checkmate the opponent's king. This means that capture of the opponent's king is inevitable upon the next move. The game also involves **no** elements of luck and the outcome of the game is soley dependent on the actions of the player. Moreover, the game of chess is known to be very hard to master with many of the best chess *Grandmasters* starting training from the ages of 7-8. The game of chess has an average of 30 moves per position. This means that if one wants to think three moves ahead of his opponent he must consider $27,000$ positions in total! This is simply not possible for a human, however for a computer this task is something that could be done in less than 1 second. By leveraging the high computational power of modern computers, I aim to write a chess engine that is able to beat the average human chess player 9 times out of 10.

1.2 Stakeholders