

HermOni Chess Bot

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Final Year Project Presentation

AI in Chess

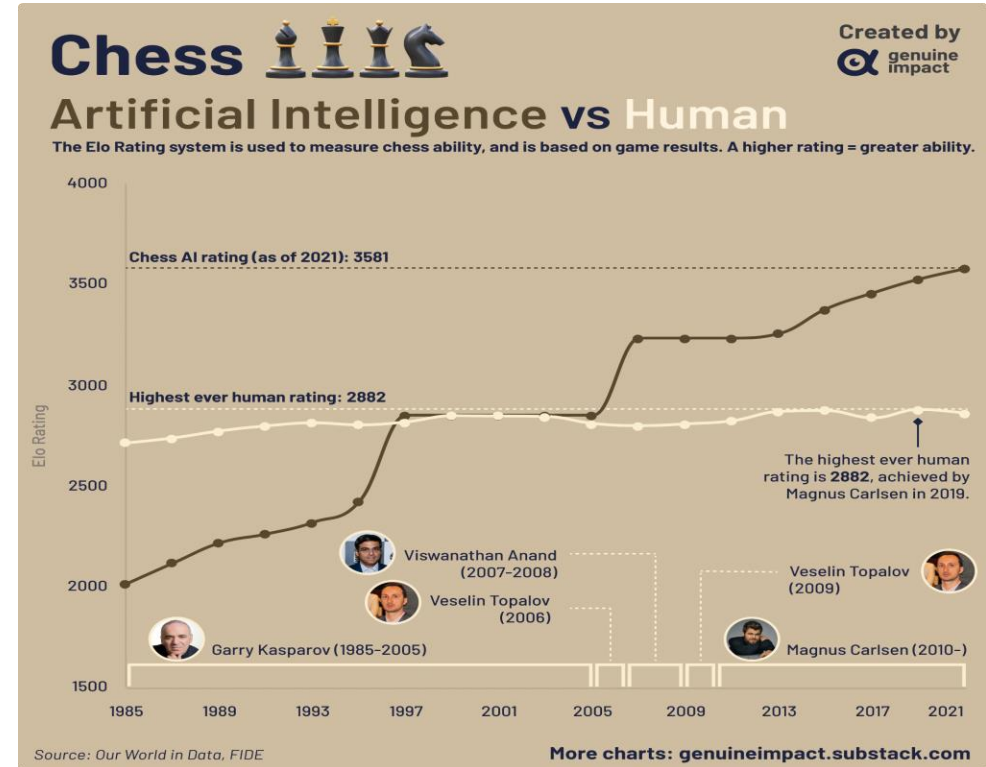
First implemented in as early as 1912

First fully automated engine created in 1957

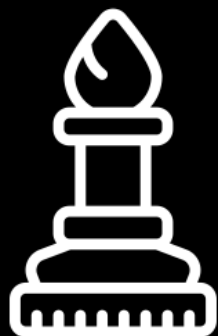
Surpassed human ability in 1997

Current estimated Elo of 3642

Highest human Elo is 2882



Practicing with AI



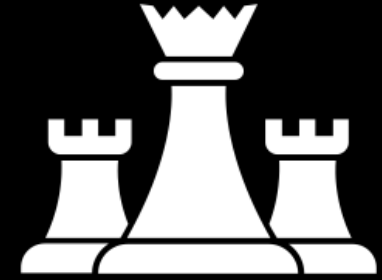
Over 100 different bots on
Chess.com

Vast majority require a paid
subscription

Large skill gaps between free bots



The HermOni Bot



Multiple levels of difficulty

Free to play on lichess.org

Play against users for fun or practice

Play against other bots



Design



Calculate moves using minimax algorithm with alpha-beta pruning

Track positions using bitboards

Implement Lichess Bot API

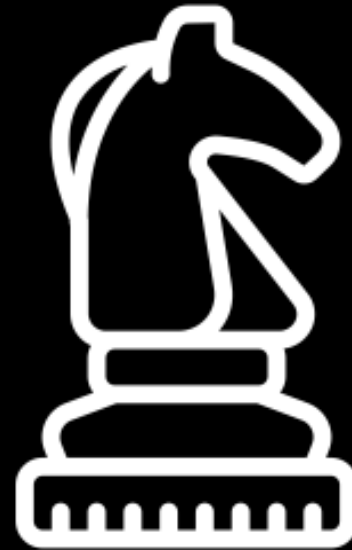


Technologies

C++

Lichess Bot API
(Python)

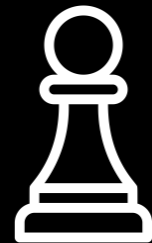
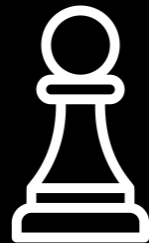
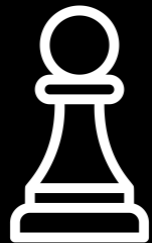
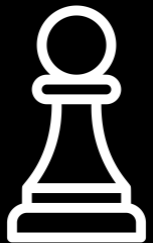
UCI (JSON)



Additional Features

Use of opening books

Use of endgame tablebases



Questions

