

Milestone 1

What have we done so far:

- Researched a semi-working gameboard of Chess.com's version of 4 player chess
 - Implemented some of the missing functionalities: checkmates, check pins, en-passant, castling
 - Some missing things (still in progress, maybe abandoned)
 - Pawn promotion: currently auto-promotes to queen.
- Implemented first chess AI strategy: random moves

Reflect: Did we achieve our goals?

- Sort of. We are ahead of schedule in terms of having a functional game but a little behind in researching strategies for 4 player chess. This past week and a half has been devoted into understanding the codebase we are adapting and that has been more difficult than expected. Furthermore, considering that we were advised to move the actual AI implementation earlier into the development phase, we may be a little behind.
- Some functions work partially: Pawn promotion only promotes to queen rather than considering other options (pawn to queen is a common strategy, should focus more on different search algorithms).

Replan: Given progress thus far, adjusting our goals:

- This week will be a catchup week where we try to finish up

Timeline:

- Week 3
 - Create minmax function
 - Research possible evaluation and heuristic functions
 - Test at least one evaluation function
 - Create some useful heuristics
 - Test evaluation function AI vs. random AI (10 trials, 2v2 old AI vs new AI)
- Week 4
 - Start testing evaluation functions and heuristics
 - Begin to finalize our strategy and streamline our algorithm
- Week 5 onwards
 - Continue to optimize our algorithm
 - Start testing our algorithm against The 4-Computer and against us
 - Streamline space usage
 - Make sure our minimum viable product has been achieved
 - Push to achieve our ideal goals