

Online Chess

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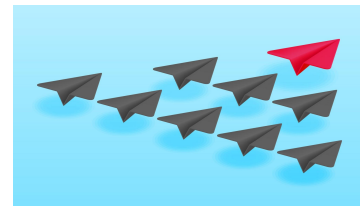


Features

- Fully integrated modern online chess with most of the expected features for people who play a lot of online chess
- Working online multiplayer from anywhere in the globe through amazon servers.
- A lobby for choosing between games with spectate and join buttons for any configuration wanted.

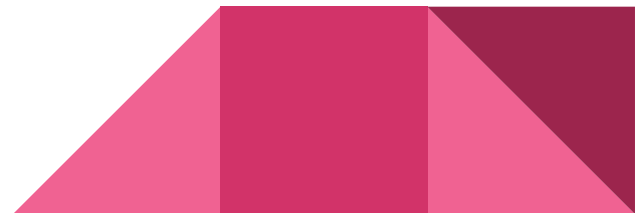


Uniqueness



While this project was a fun challenge, it was not particularly new, many people have done different versions of online multiplayer chess ([chess.com](https://www.chess.com), [lichess.com](https://lichess.org), etc), so in this vain, I implemented 2 things that are pretty unusual.

1. MCBAC rating system, instead of the traditional ELO scale used in chess, MCBAC (Magnus Carlsen Blood Alcohol Content) relates chess strength to the best chess player of all time.
2. En Passant is now a forced move, if it is available, it must be played.



Stack and Tech



AWS Amplify powers the full stack:

- React — Frontend UI
- S3 + CloudFront — Hosts the built React app
- AppSync — GraphQL API with real-time updates
- DynamoDB — NoSQL database for games, moves, and players
- Cognito — User authentication + authorization

Version Control

- Github

Amplify



Amplify is a framework made by Amazon and available in the Node Package Manager. Amplify is built around simplifying the AWS build process a lot. Though, it still is still not easy to use, much of the complications that come with serverless, distributed setups in the cloud can be abstracted away.

I highly recommend Amplify for people who want cheap web hosting on AWS without having to understand every detail of their complicated cloud.





DEMO



Takeaways

- Chess is very subtly feature rich
- Authentication is complicated and small typos can take hours to fix
- APIs are a godsend, this project used Chess.js, React-ChessBoard, and AWS-Amplify to make this process actually doable within the scope of this project
- NoSQL is weird

