

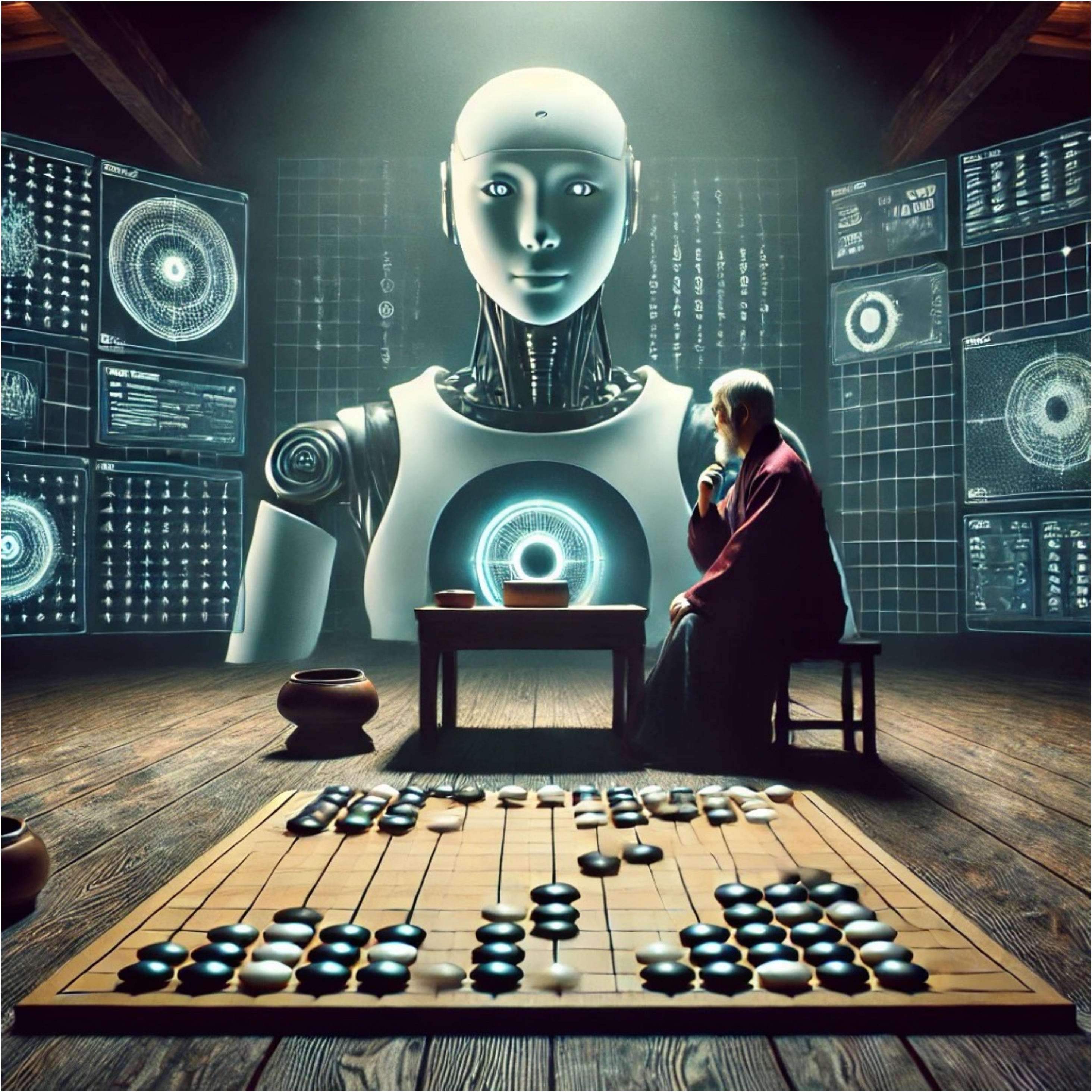


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AlphaGo

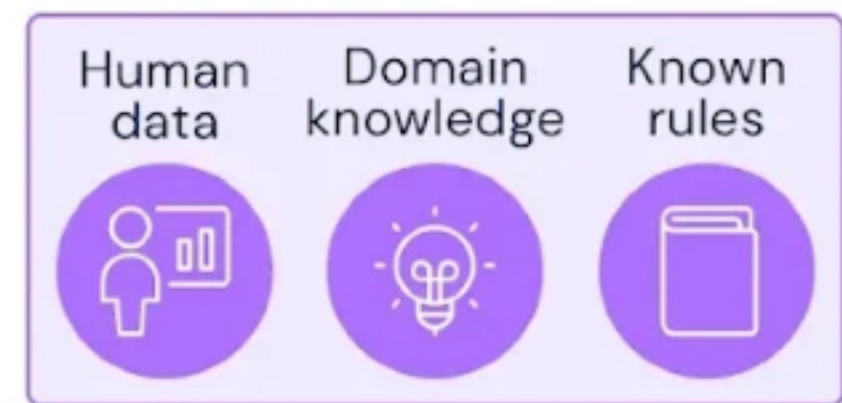
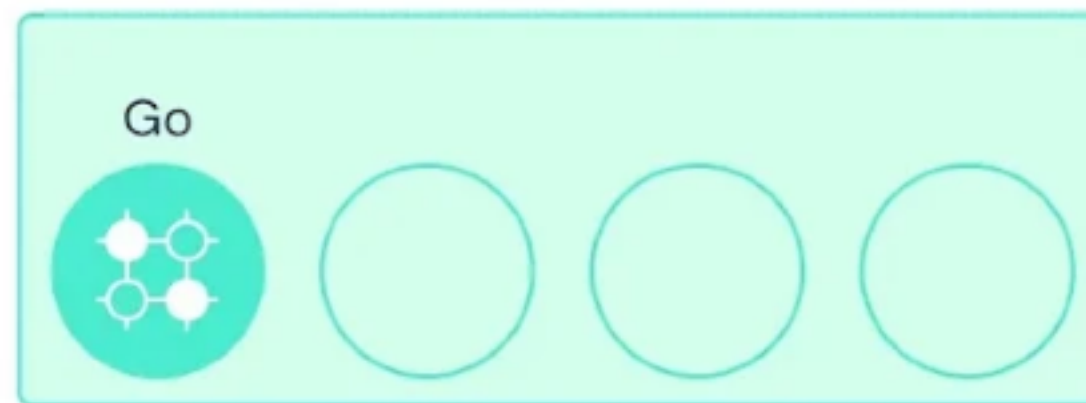
# Model-based reasoning for games

Silver et al. (2016). Mastering the game of Go with deep neural networks and tree search. Nature, 529(7587), 484.

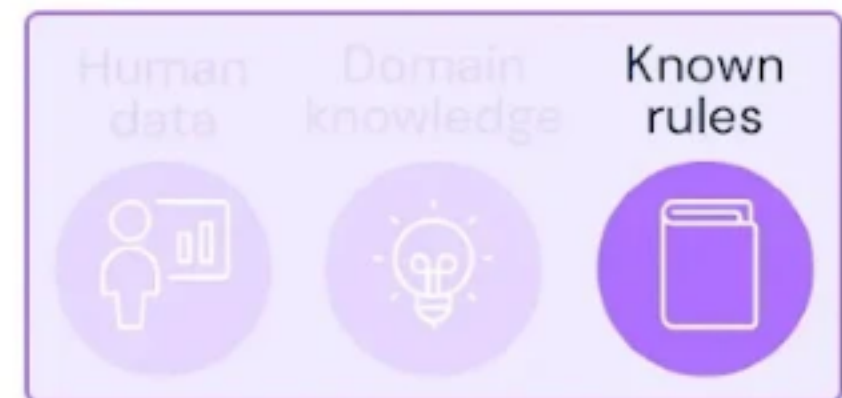
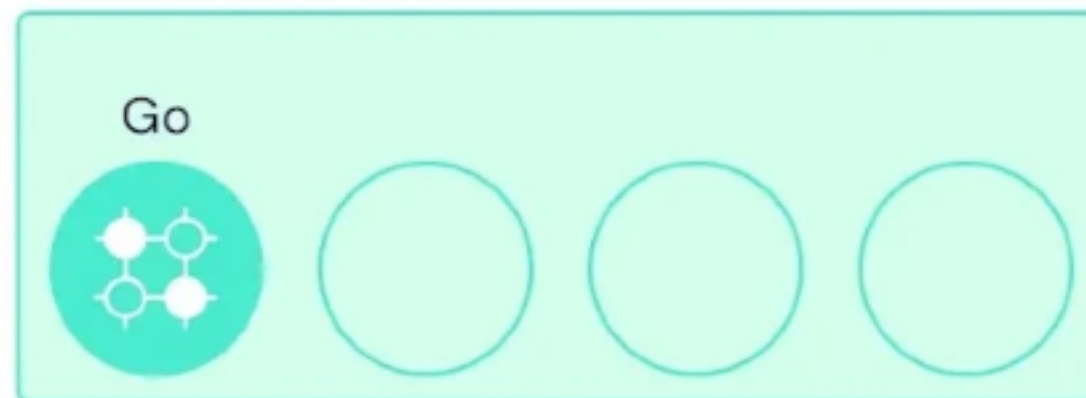


## Domains

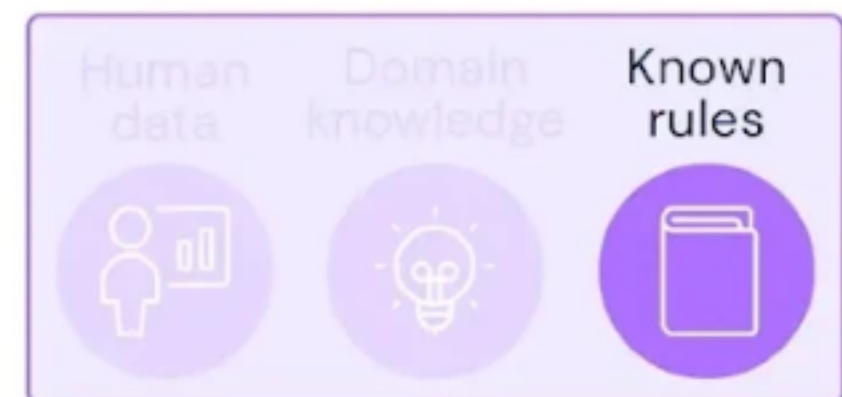
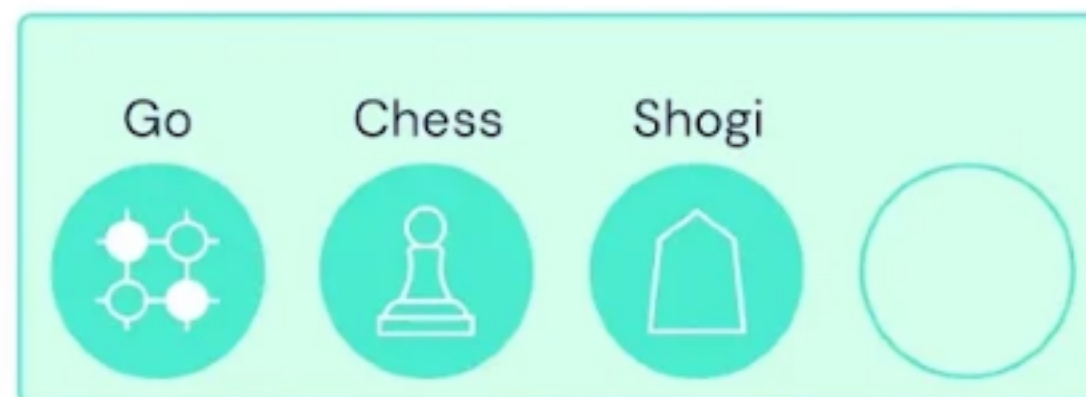
## Knowledge



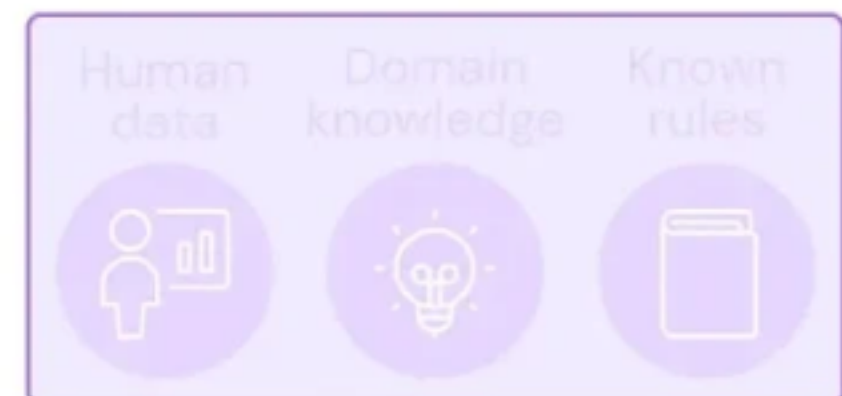
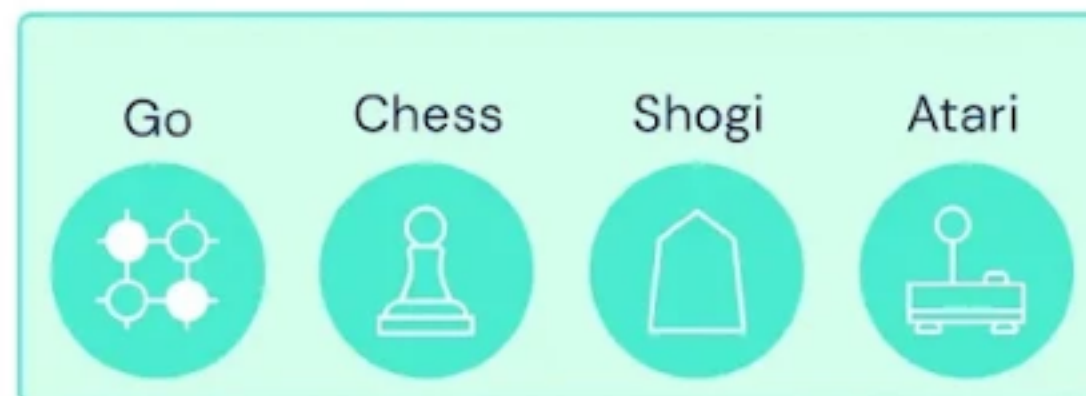
**AlphaGo** becomes the first program to master Go using neural networks and tree search  
(Jan 2016, Nature)



**AlphaGo Zero** learns to play completely on its own, without human knowledge  
(Oct 2017, Nature)



**AlphaZero** masters three perfect information games using a single algorithm for all games  
(Dec 2018, Science)



**MuZero** learns the rules of the game, allowing it to also master environments with unknown dynamics.  
(Dec 2020, Nature)

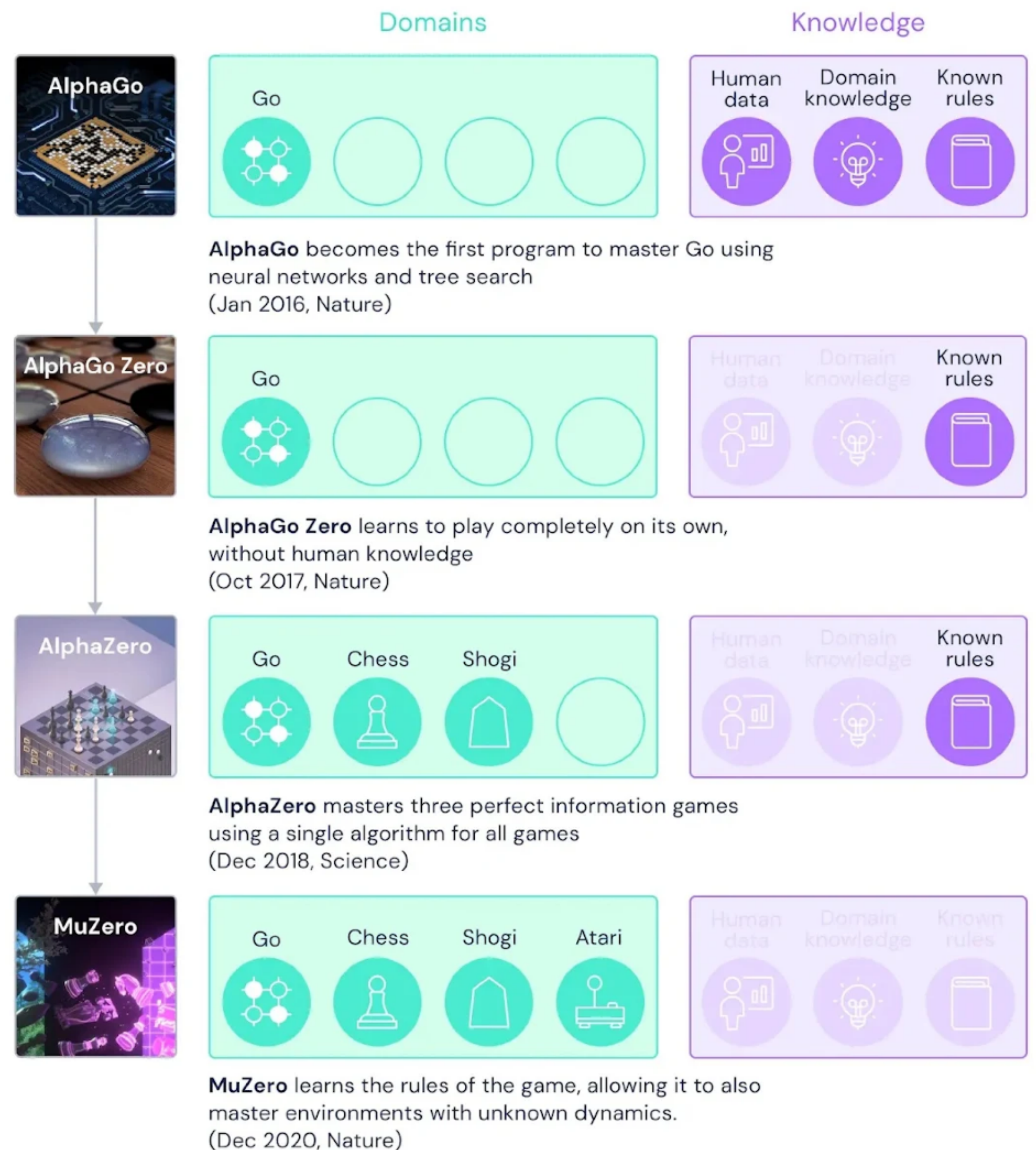


# AlphaGo

## Model-based reasoning for games

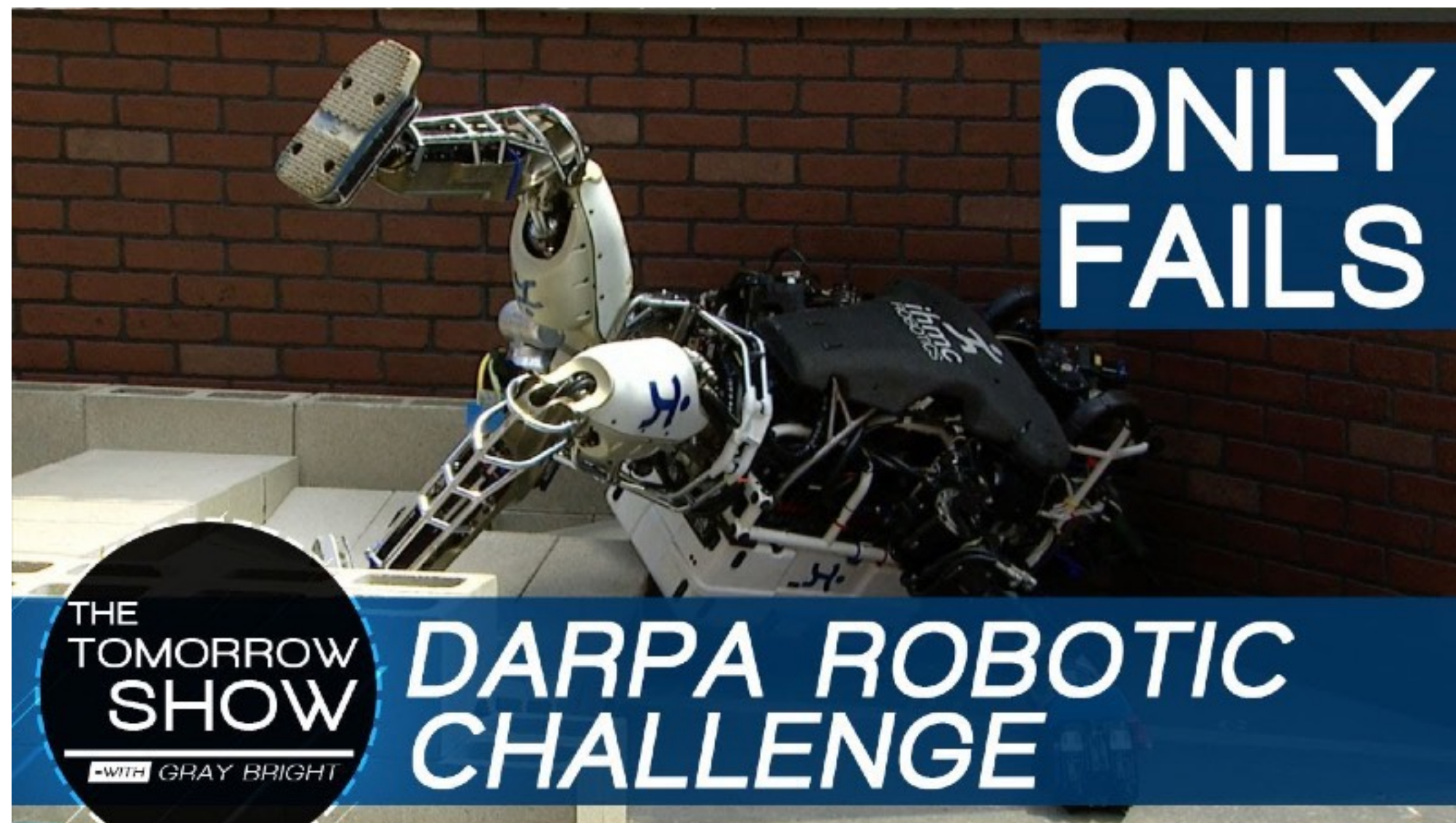
Silver et al. (2016). Mastering the game of Go with deep neural networks and tree search. Nature, 529(7587), 484.

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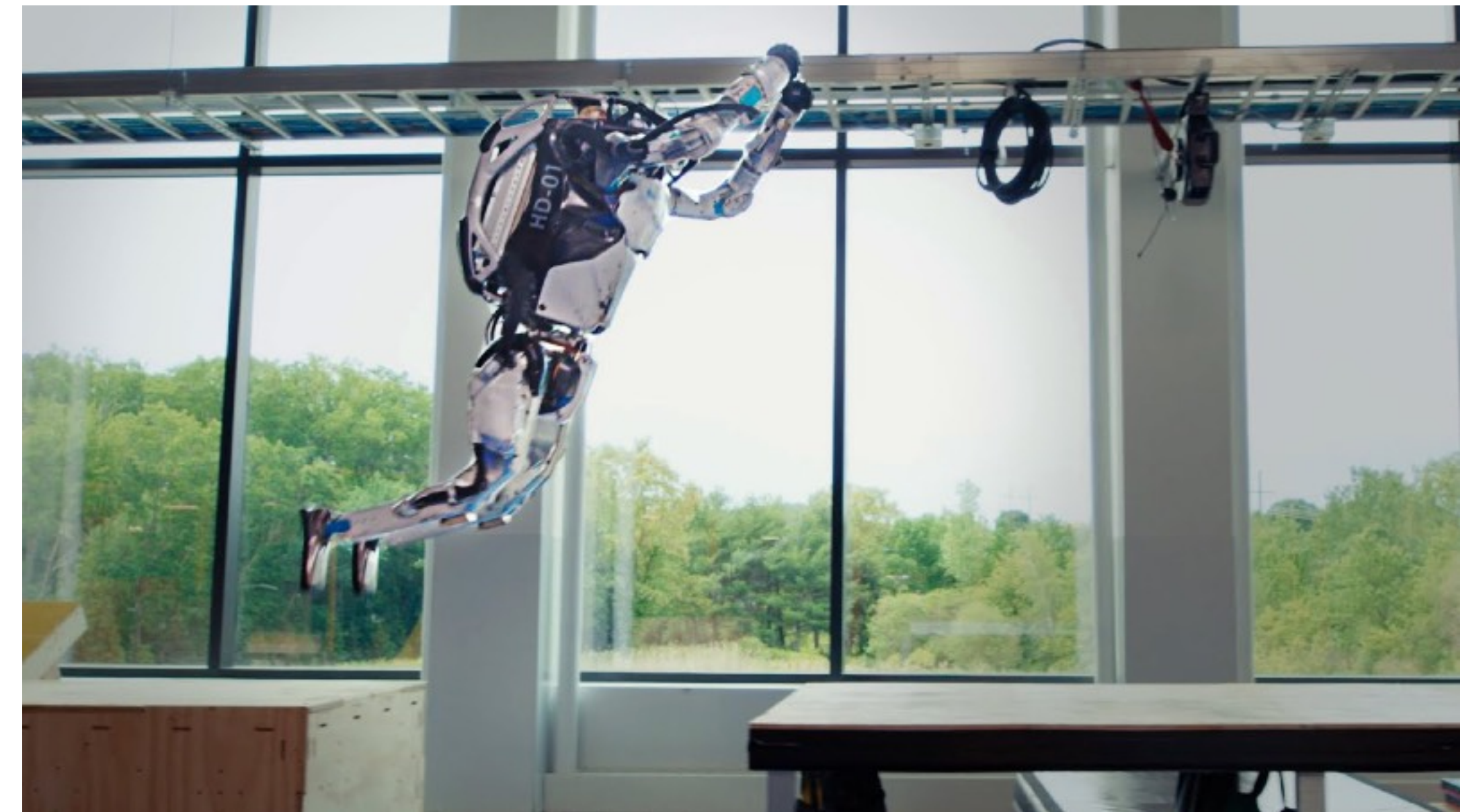




# Machine Learning for Robotics



DARPA Robotics Challenge 2015



Boston Dynamics Atlas - Partners in Parkour