

# TA BLUT BROTHERS

Tablut: Challenge 2023

David Crémolini & Gabriele Nanni

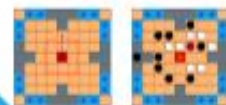
## WHAT DID WE USE

- Alpha Data Pruning
- Implementation in C++ using ANTLR library



## DYNAMIC EVALUATION

- Use pieces of the game with different strategies
- When the king is on the board, evaluate the game as a win
- When the king is not on the board, evaluate the game as a loss



RETRY



RETRY



RETRY



THANKS FOR YOUR  
ATTENTION



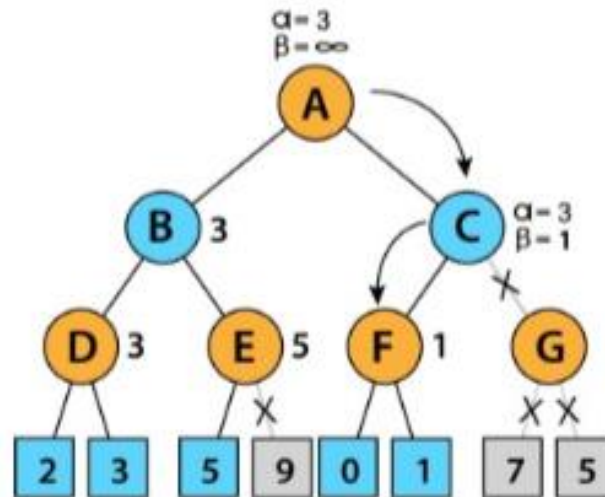
# **TA BLUT BROTHERS**

Tablut Challenge 2023

Davide Cremonini & Gabriele Nanni

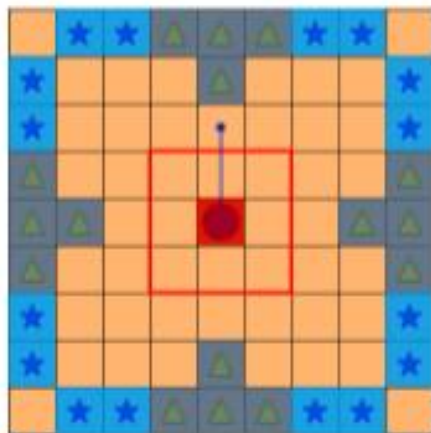
# WHAT DID WE USE

- Alpha-Beta Pruning
- Implementation with JAVA AIMA Library



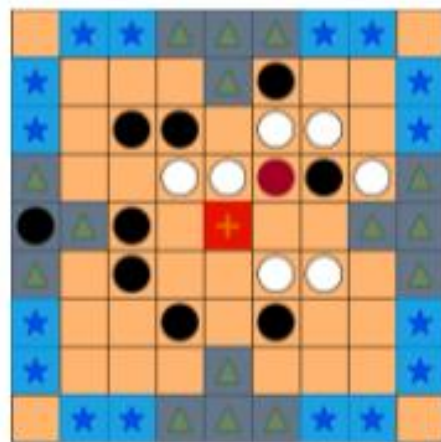
# DYNAMIC EVALUATION

- Two phases of the game with different strategies
- When the King leaves the center square Black player enters late game
- When  $n \cdot BP$  become less than  $1.5 \cdot n \cdot WP$  White player enters late game

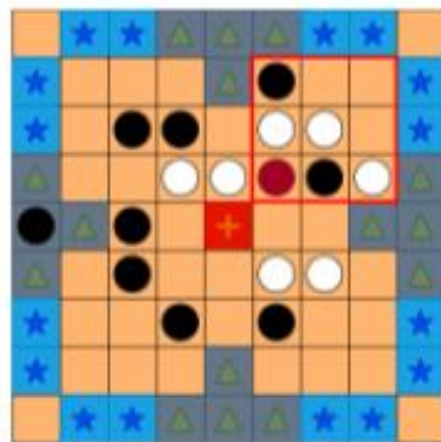


# METRICS

Total pawns on the board  
(B or W)



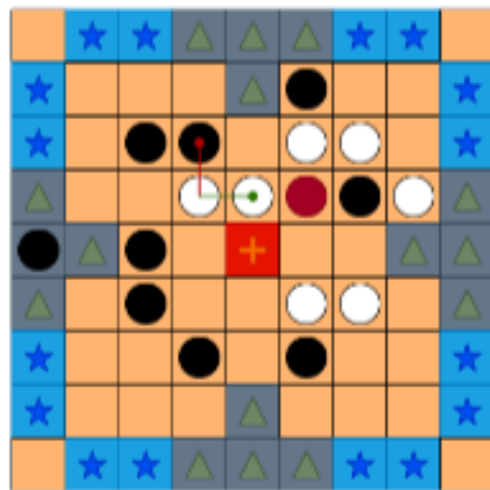
Pawns in King's quadrant  
(B or W)



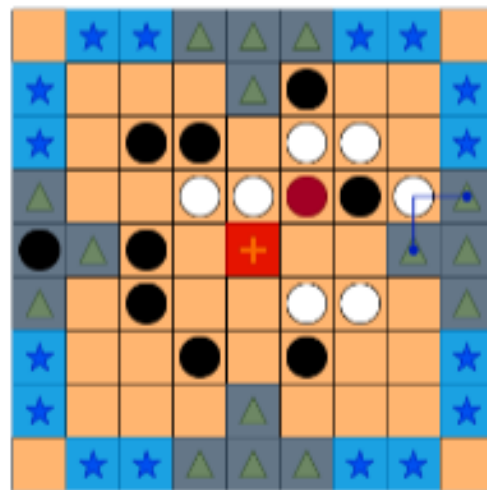


# METRICS

Number of nearby Friends  
and Enemies

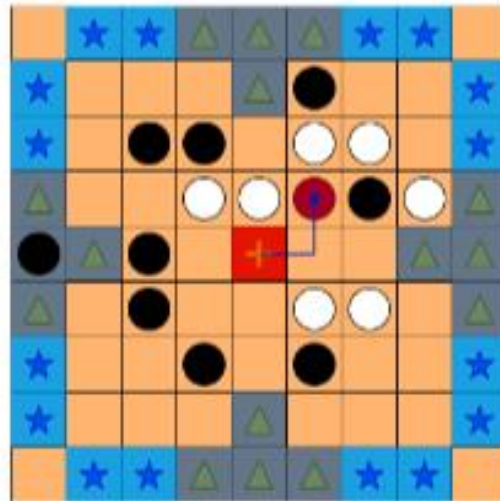


Number of nearby camps



# METRICS

Position of King



Bonus for potential win

# **THANKS FOR YOUR ATTENTION**

Happy Holidays!

