

# All Rules Gobang AI

## CS181 proposal presentation

codingnooob  
liuchang  
ycf

2022 年 12 月 14 日



上海科技大学  
ShanghaiTech University

## Gomoku/Gobang

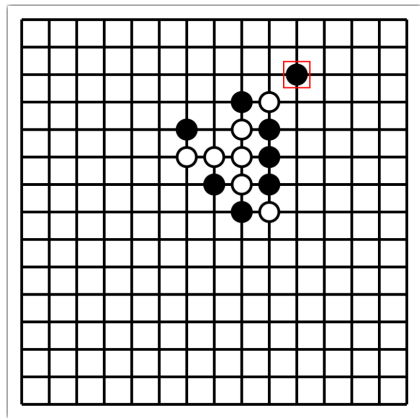
a 15×15 board.

an unbroken chain of five chess pieces horizontally, vertically, or diagonally would result in a win.

## First Player Advantage

restricted move would make the opponent win.

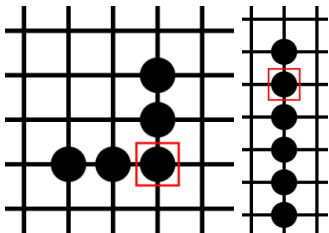
There are also several rules of opening and swap.



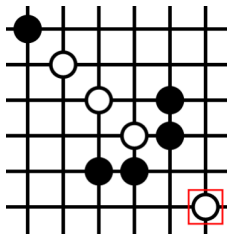
# Topic

## restricted move

Black chess can't be played in certain places



White player could force black player to do that.



- ① Gobang is very close to the course content
- ② Gobang requires less computility than other chess
- ③ This game is awesome
- ④ Although there are many Gobang AI, we could make our own balance one.

## Main methods

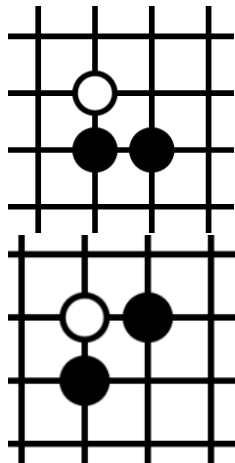
Adversarial search → Alpha-Beta pruning  
heuristic search(experience)

## Probably would not work

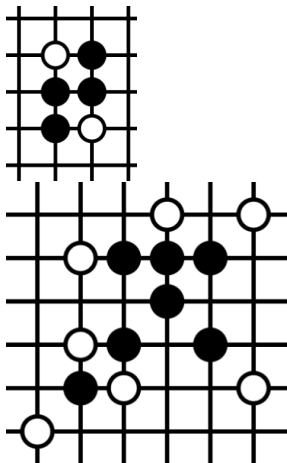
Supervised Machine Learning(Chess Manual)

Unsupervised Machine Learning(Self antagonism/genetic algorithm)

## Opening



## Special parts



## Links

More links would make success easier.  
Remain "Four"s.

## Surround

Like Go, surrounding the opponent may bring advantages.

*Thank You*