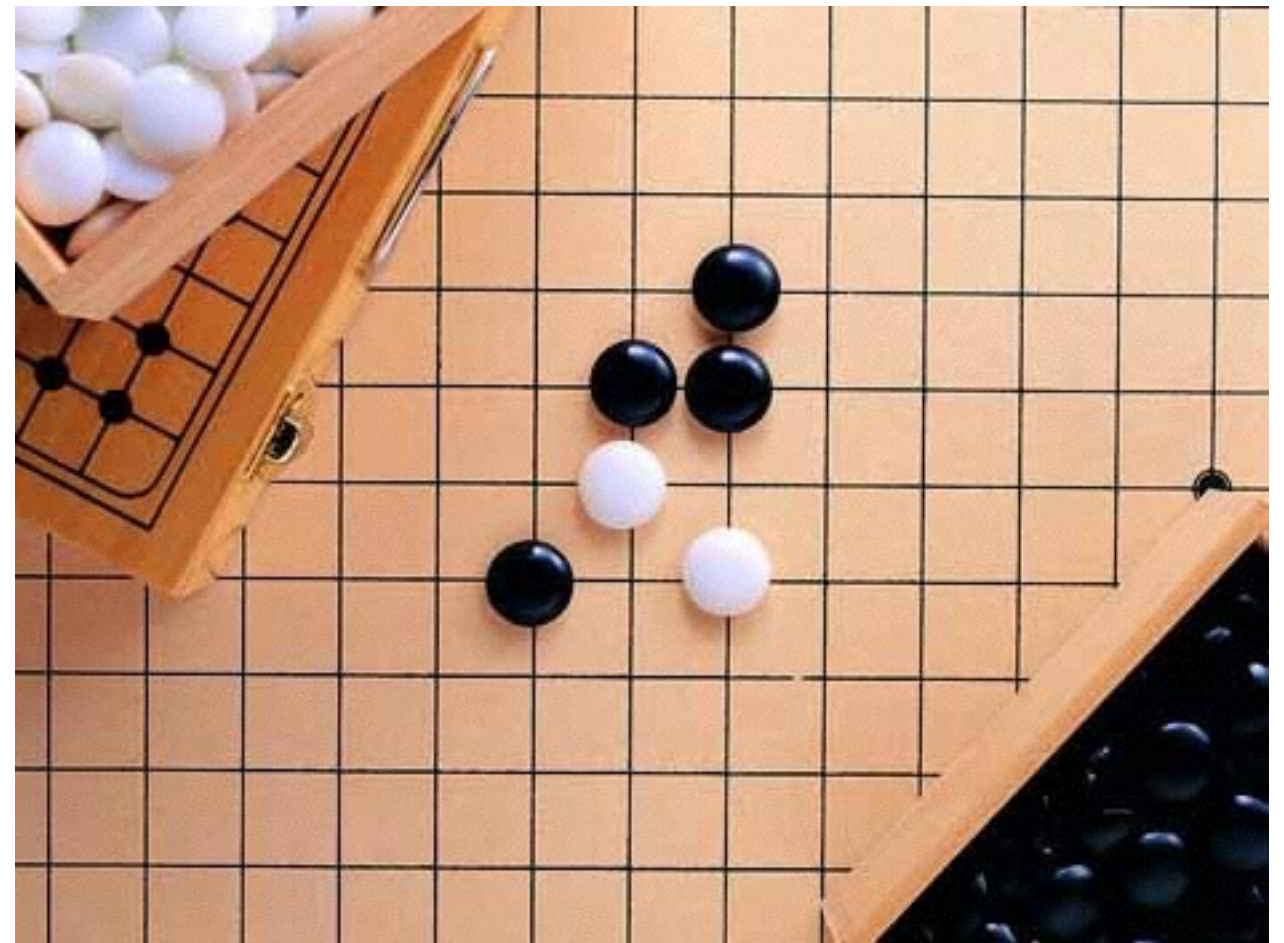# *Web Game of Gomoku*

- A simple version of Go. Also called Gobang or Five in a Row.

- Requires a row of exactly five stones for a win.

- *Artificial Intelligence Technic*

  - Adversarial Search

  - Alpha-Beta Pruning with Cutting Off Search

- *Implementation*

  - A Web Application

  - Server-end: Common Lisp with Caveman2

Key Technics:
The Evaluation Function

Situation	Evaluation Value
□ ● □	10
○ ● □	1
□ ● ● □	100
○ ● ● □	10
□ ● ● ● □	1000
○ ● ● ● □	100
□ ● ● ● ● □	10000
○ ● ● ● ● □	1000
● ● ● ● ●	1000000

$Evaluation(t) = \sum Evalution\text{-}Value(t)$

Function	Feature
Evalution(self)	Just to Attack
Evalution(self) - Evalution(opponent)	To Attack and to defend too conservative
(2 × Evalution(self)) - Evalution(opponent)	To Attack and to defend more aggressive

Conclusion

- The Alpha-Beta pruning has really poor performance (Do ONE pruning every 80 checking states approximately).

- Three or four level search is enough for Gomoku.