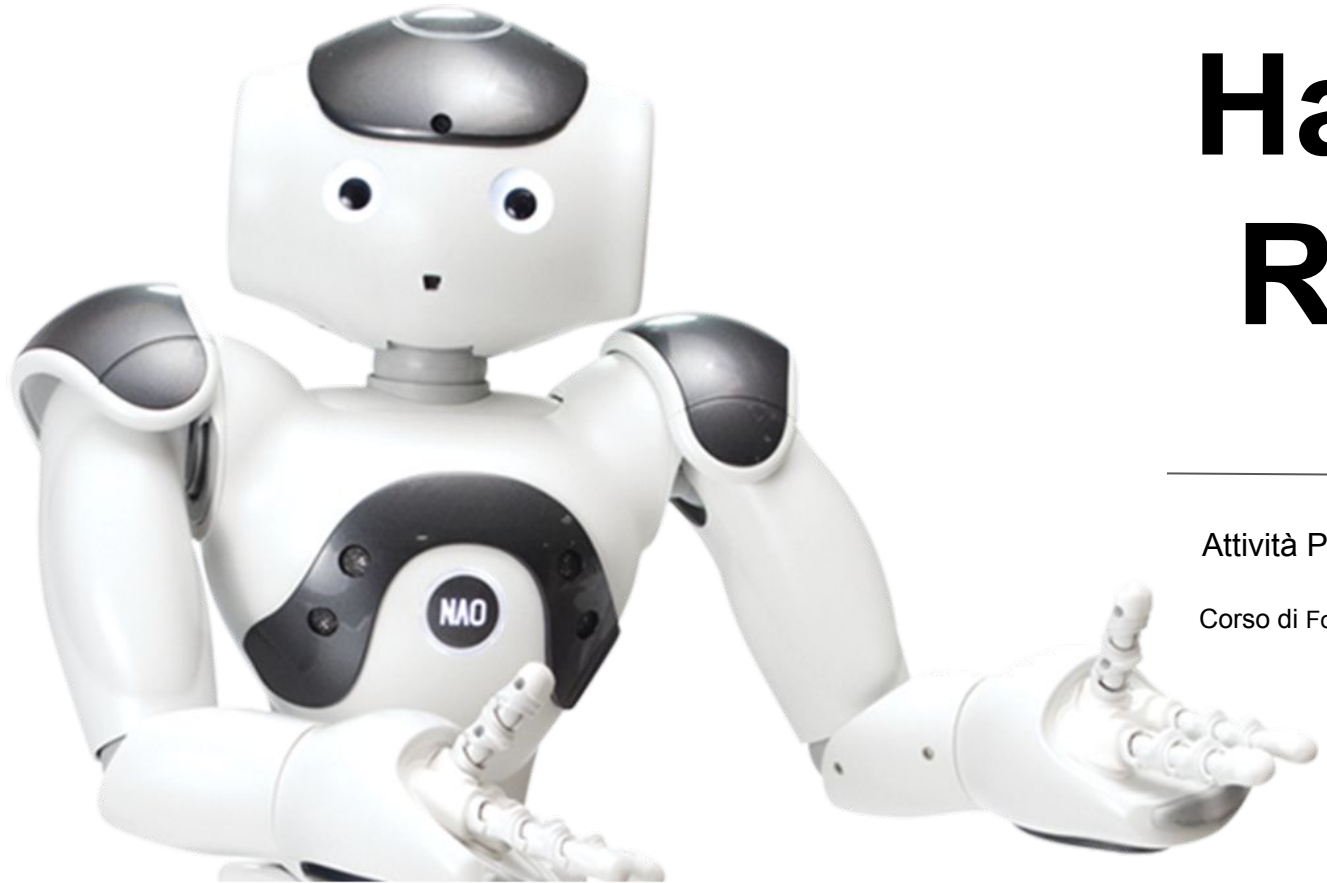


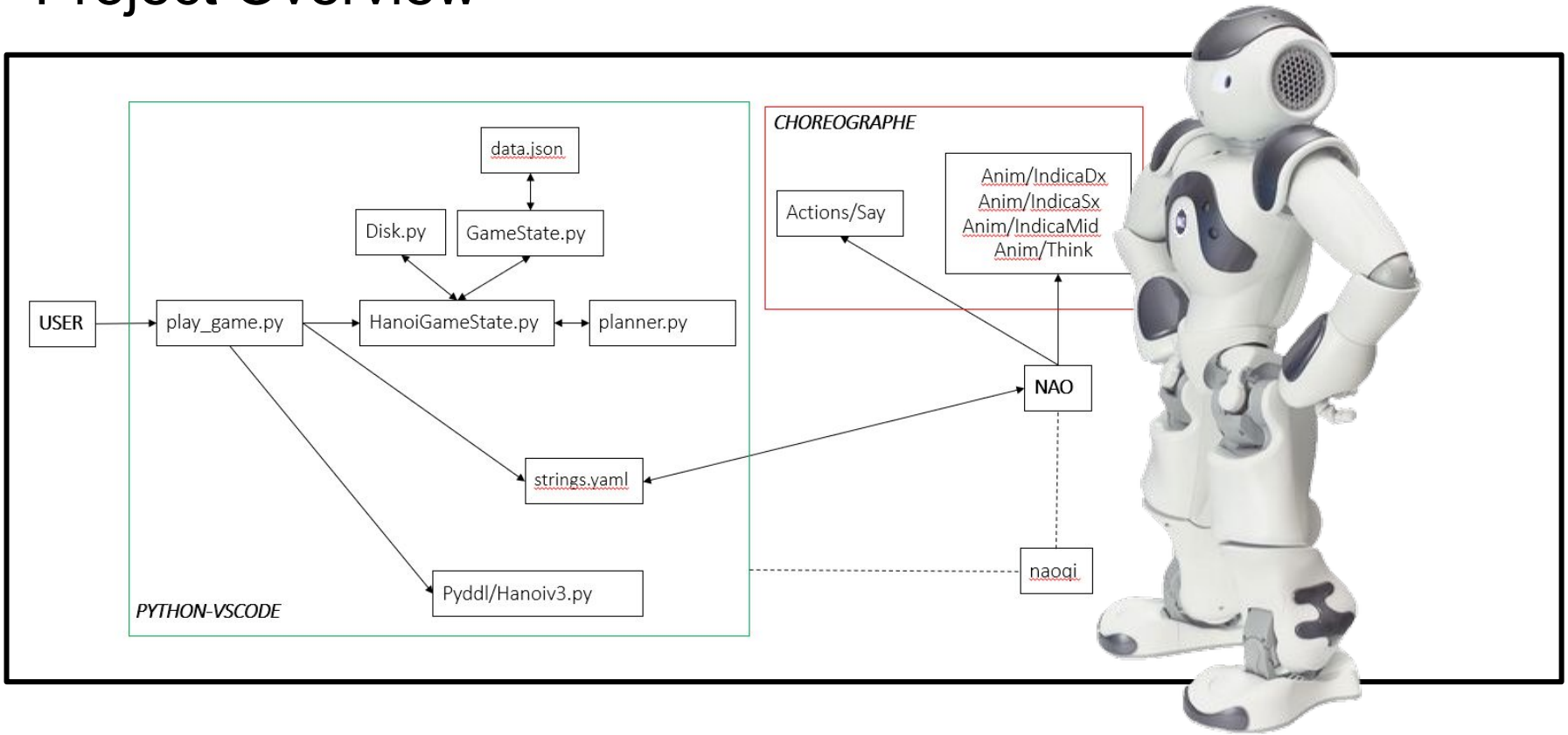
HaNAO Robot

Attività Progettuale su NAO Robot

-

Corso di Fondamenti di Intelligenza Artificiale

Project Overview



Obiettivi

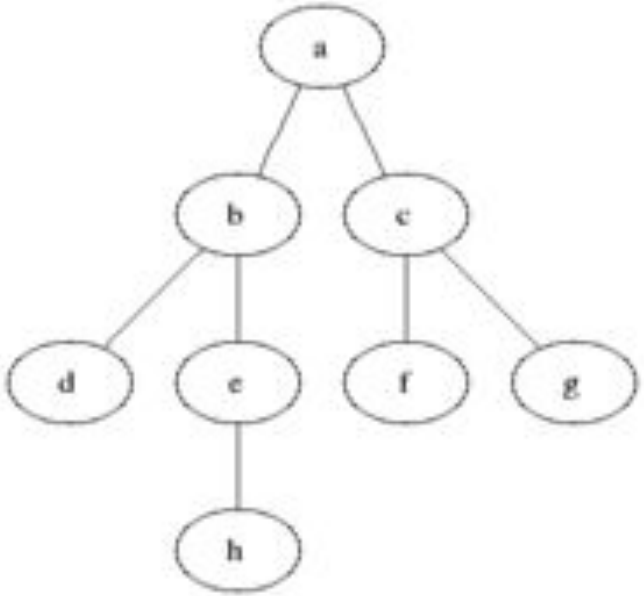
- Risolvere il gioco con:
  1. Breadth First Algorithm
  2. STRIPS Planner

- Comparare i risultati

Strumenti

- Naoqi Python Library
- Choregraphe
- VisualStudio Code
- Python 2.7.18
- PyDDL
- Google

Planning - BFA



Planning - STRIPS

```
8   global_domain=Domain((
9           Action(
10              'move',
11              parameters=(
12                  ('position', 'X'),
13                  ('position', 'Y'),
14                  ('position', 'Z'),
15              ),
16              preconditions=(
17                  ('Clear',  'X'),
18                  ('Clear', 'Z'),
19                  ('On', 'X',  'Y'),
20                  ('smaller', 'X', 'Z'),
21              ),
22              effects=(
23                  neg(('Clear', 'Z')),
24                  neg(('On',  'X', 'Y')),
25                  ('Clear', 'Y'),
26                  ('Clear', 'X'),
27                  ('On',  'X',  'Z'),
28              ),
29          ),
30      ))
31
```

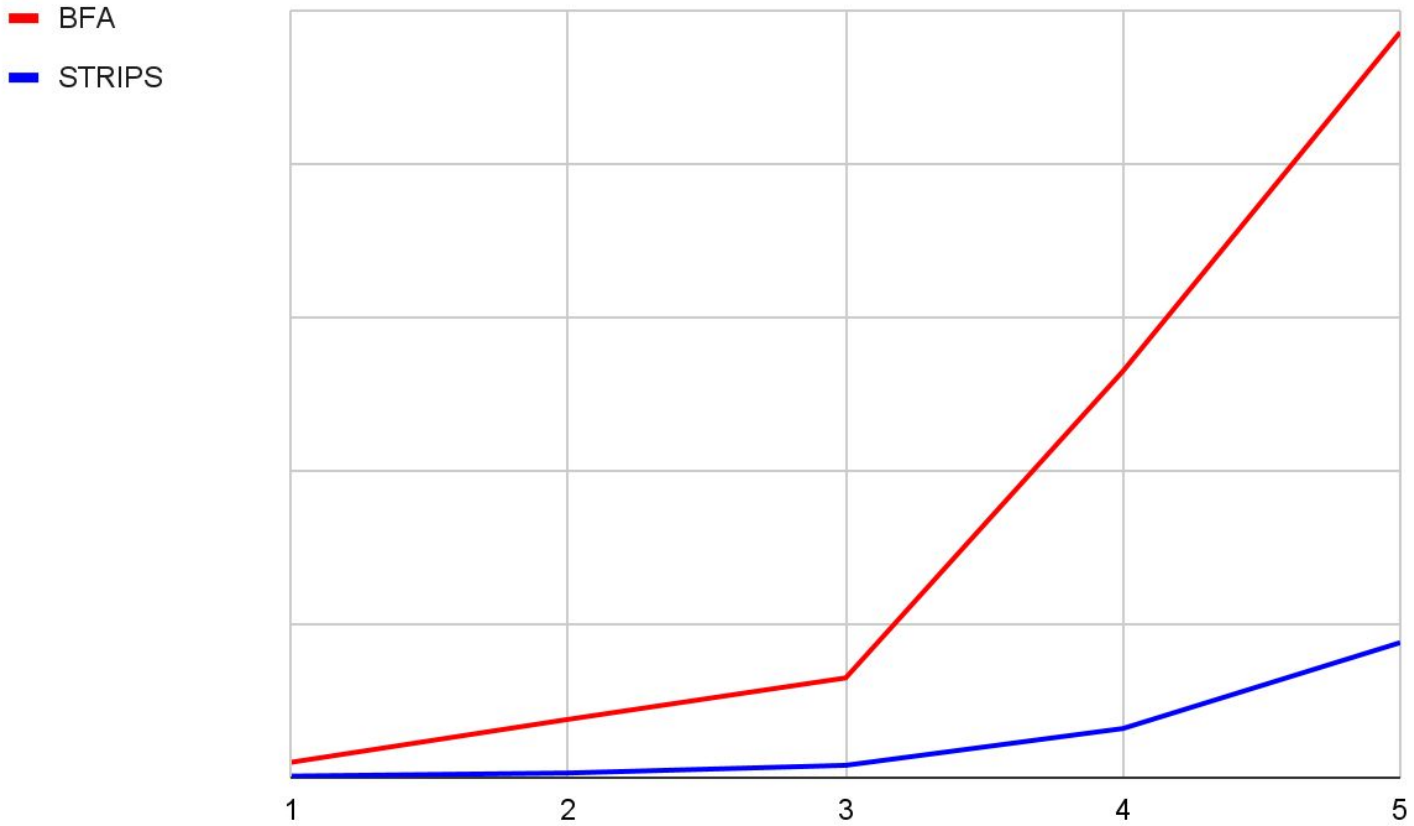
Animazioni - Coreografie

- PointStart
- PointMiddle
- PointGoal
- Thinking
- *Nodd*
- *Wave*

Comparazione Risultati (Su 10 Test)

N° Dischi	Mosse - BFS	Mosse - STRIPS	Durata media - BFS	Durata media - STRIPS
1	1	1	0.0099999904633	0.0010001659393
2	3	3	0.0380001068115	0.0030000209808
3	7	7	0.0650000572205	0.0080001354218
4	15	15	0.265000104904	0.0320000648499
5	31	31	0.486000061035	0.0880000591278

Comparazione Risultati (Su 10 Test) - Tempo di risoluzione




DEMO

Grazie per l'attenzione

Progetto e presentazione a cura di:
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