

# BahiaRT: Latest Projects and Research Results

*RoboCup 3D Soccer Simulation Offenburg Workshop  
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# Agenda

- ① Small fixes generating a big evolution
- ② Kick Optimization
- ③ Setplays Learning



## Small fixes generating a big evolution

Table: RoboCup 2018 vs 2019 performance results.

	2018	2019
<i>GS</i>	8	3
<i>GC</i>	36	43
<i>Total Games</i>	17	17
<i>GS Rate</i>	0.4706	0.1765
<i>GC Rate</i>	2.1176	2.5294
<i>Total Score</i>	19	9
<i>Score Rate</i>	0.3725	0.1765

Table: Brazil Open 2018 vs 2019 performance results.

	2018	2019
<i>GS</i>	20	14
<i>GC</i>	5	1
<i>Total Games</i>	10	11
<i>GS Rate</i>	2.0	1.2727
<i>GC Rate</i>	0.5	0.0909
<i>Total Score</i>	17	23
<i>ScoreRate</i>	0.5667	0.6970



# Small fixes generating a big evolution

- Reactivation and adjustment of the Defense system
- Adjustments in the use of Backward walking
- Adjustments in the use of the Direct kick
- Improvement of path-planning strategy



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# Kick Optimization

- Use of state-of-the-art machine learning strategies to optimize the current kick skills in the team
- preliminary stage: choice of algorithm and tools
- Probable choices: PPO algorithm and tools OpenAI Gym and pyBullet
- Main goal: get stable and efficient kicks for long, medium, and short distances
- Preliminary results expected in RoboCup 2021

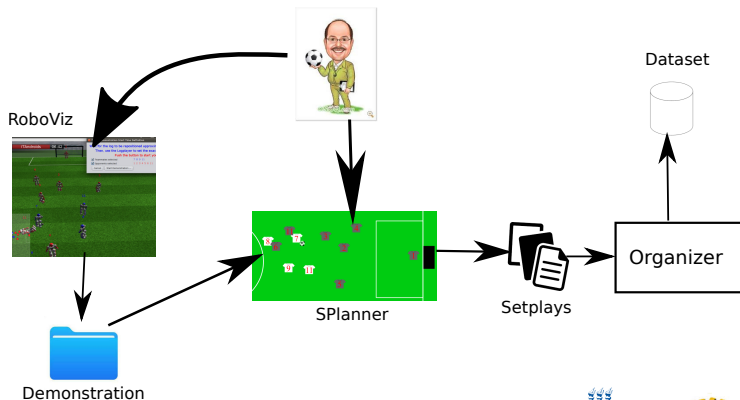


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# Setplays Learning





# Questions ?



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# Thank You !

