Practical Planning for Angry Birds

Research Seminar, WS 2018

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https://iccl.inf.tu-dresden.de/web/Seminar_Practical_Planning_for_Angry_Birds_(WS2018)/en
Practical Planning for Angry Birds
Initial State:
Easy?
Practical Planning for Angry Birds
Angry Birds and the AI Birds Competition

In the *AI Birds Competition*, a human has won in the last 5 years. Why?
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It requires a combination of several AI disciplines:

- **Knowledge Representation and Reasoning**
  - In what processable (formal) language do we represent the world?
  - How can we draw conclusions, using the given knowledge?

- **Planning**
  - From the initial state, how do we reach the goal state?

- **Heuristic Search**
  - Search for the best solution, using background knowledge (heuristics).

- **Machine Learning**
  - Learn from observations, in order to deal with new situations.

- **Computer Vision**
  - Recognize certain objects in the given image input.
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  - We will use the competition setup from http://www.aibirds.org
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  ⇝ Which AI methods exist and can be applied? (Literature)
  ⇝ Has this already been done? (Literature)
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- Scientific article and presentation of the chosen approach.
  ⇝ Article at most 6 pages (+ references) in LNCS style.
  ⇝ 15min presentation of your article.
  ⇝ Article and presentation will be graded.
Practical Planning for Angry Birds
About this Seminar – What’s Next

- Friday, 19th October: AI Bird Software Introduction and setup.
  ⇾ Details on the course website!

- All subsequent Fridays we will meet (optionally) to discuss your progress or other issues.
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<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Friday, 19. October</td>
<td>Introduction AI Birds Software</td>
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<tr>
<td>Friday, ...</td>
<td>Regular Consulting Sessions (optionally)</td>
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<tr>
<td>Friday, 21. December</td>
<td>Deadline, Draft Article</td>
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<td>TBA</td>
<td>Deadline, Final Article</td>
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<td>Presentation (Session)</td>
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