Opdracht 3 - Literatuur verwerken (algemeen)

- Bekijk de eerste 5 artikelen uit JAIR volume 43 http://www.jair.org/vol/vol46.html. (pagina's 1 - 201). Geef voor elk artikel in het kort Merk op: het is hiervoor niet nodig het artikel helemaal te begrijpen. Het gaat om de structuur van het verhaal en niet om de inhoud):
    a) Vraagstelling / hypothese (max. 3 zinnen)
    b) Conclusie / claim (max. 3 zinnen)
    c) Type vraagstelling: empirisch, methode, formeel, science of artificial (kies er 1 of formuleer combinatie)
    d) Type onderzoek/onderbouwing: bv. methode implementeren en testen, stelling bewijzen.

1) Counting-Based Search:Branching Heuristics for Constraint Satisfaction Problems
    a) The aim of this paper is to solve constraint satisfaction problems by describing and evaluating counting-based search.
    b) "we believe counting-based search brings us closer to robust automated search in cp and also offers efficient building blocks for application-specific heuristics."
    c) /
    d) Evaluation of algorithm.

2) The CQC Algorithm: Cycling in Graphs to Semantically Enrich and Enhance a Bilingual Dictionary
    a) This paper claims to present "a novel algorithm, called Cycles and Quasi-Cycles (CQC), for the disambiguation of bilingual machine-readable dictionaries."
    b) "We show that our notion of (quasi-)cyclic patterns enables state-of-the-art performance to be attained in the disambiguation of dictionary entries, surpassing all other disam-biguation approaches (including the popular PPR), as well as a competitive baseline such as the first sense heuristic. We explore the novel task of dictionary enhancement by introducing graph patterns for a variety of dictionary issues, which we tackle effectively by means of the CQC algorithm. We successfully apply CQC to the task of synonym extraction. While data-intensive approaches achieve better performance, CQC obtains the best result among lexicon- based systems."
    c) /
    d) Implementation and testing of method.

3) Location-Based Reasoning about Complex Multi-Agent Behavior
    a) "This paper took on the task of understanding the game of capture the flag from GPS data as an exemplar of the general problem of inferring human interactions and intentions from sensor data.
    b) "We have formulated four research questions and designed experiments within the CTF domain that empirically answer them. Compared to alternative approaches to solving the

multi-agent activity recognition problem, our augmented Markov logic model, which takes into account not only relationships among individual players, but also relationships among activities over the entire length of a game, although computationally more costly, is significantly more accurate on real-world data. Furthermore, we have illustrated that explicitly modeling unsuccessful attempts boosts performance on other important recognition tasks.
c)
d) /

4) Robust Local Search for Solving RCPSP/max with Durational Uncertainty
   a) "Given a level of risk $0 < \varepsilon \leq 1$ chosen by the planner, we investigated the problem of finding the minimum $(1 - \varepsilon)$-guaranteed makespan (i.e. Robust Makespan) and proposed methods to find a schedule policy (POS) such that when uncertainty is dynamically realized, the execution policy will result in a solution whose value is as good as robust makespan."
   b) "Experimental results illustrate the improved performance of local search with the new fitness evaluation, which provider tighter bounds on robust makespan and better partial order schedules compared to the existing method."
   c) /
   d) Testing implemented algorithms.

5) Learning and Reasoning with Action-Related Places for Robust Mobile Manipulation
   a) "In this article, we present a system that enables robots to learn action-related places from observed experience, and reason with these places to generate robust, flexible, least commitment plans for mobile manipulation."
   b) "We believe our system has several advantages. First of all, the learned model is very compact, with only 2 (deformation) parameters, which are directly related to task-relevant parameters. On the other hand, as the model is acquired through experience-based learning, the model is grounded in observed experience, and takes into account the robot hardware, its control programs, and interactions with the environment. Finally, by using ARPlaces to determine appropriate base positions, difficult positions for grasping are avoided, which leads to more robust behavior in the face of state estimation uncertainty, …"
   c) /
   d) Implementation and testing of algorithm and defending a claim.

- Bedenk ca. 6 beoordelingscriteria voor een artikel. Maak een beoordelingsformulier in de vorm van lijst van beoordelingscriteria voor AI onderzoek. Formuleer de criteria zo dat een mede-student ze kan toepassen.

    - Is de title duidelijk/begrijpbaar?
        o Geeft de titel een beeld van waar het artikel over zou kunnen gaan?

- "punt duidelijk"
  - Is de boodschap van de schrijver duidelijk?
- Is het artikel overzichtelijk?
  - Is er een duidelijke opbouw?
- Repliceerbaar
  - Als je de testen zou uitvoeren of de redenering zou belopen zou je dan op hetzelfde uitkomen?
- conclusie volgt uit het voorgaande
  - Is het duidelijke hoe de schrijvers aan de conclusie komen?
- Origineel
  - Belangrijk, maar niet nodig te bewijzen.

- Schrijf een complete (1 a 2 pag) review van "anonieme paper" (**zie bijlage**) en vul je eigen formulier in. NB: beoordelen of het artikel origineel is voert iets te ver voor deze opdracht, dus dit is niet nodig.

Assignment 3 – review of a paper.

In this part of the assignment I will present a review on an article with a filename: "anonieme-paper.pdf".

This article starts with a malicious title: "Trajectory Clustering of Network Constrained Moving Objects and Applications to Road Traffic Analysis". Using a malicious title does not give a clear image to what the content of this paper may be. The reader is, for example, not aware of the type of moving objects and the title is too ambiguous.

      The abstract does not make it clear to the reader what the writer is supposed to propose of to prove with this paper. This a not a correct manner in which one should use an abstract, for the purpose of an abstract is to make it clear what the content of a paper will be.

      When scanning the paper it is very difficult to find some type of organization in this paper. There is not obvious structure within this document, which makes it more difficult to read/scan through. The scanning also makes clear that there are a lot of spell, style and grammar error. This does not make the paper very scientific, because a scientific paper with a lot of these errors loses its credibility.

      It is not possible to reproduce the result presented in the paper, because the meaning of most variables/signs used in certain formulas are not clear.

   The conclusion does not following from the section above. In fact, the writer has to introduce new evidence/reference to support his claim.

To conclude, this paper is not a well-written paper. First of all, there are a lot of spell, style and grammar errors. Second, the writer does not state a clear claim so it is not possible to check if the inference is done correctly, which is necessary when writing a paper. Finally, the points for which I have determined to check the credibility/value of this paper did not present me with a positive result to judge otherwise then to say that the paper is not well written.

NB. The filename makes it equally difficult to find the relation between the content and the paper. If my laptop were not able to search within a document and only on filename it would be difficult to recall the file when thinking of the content.