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2015/16

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Automated Small Datanalyst

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Course: MSc Web Intelligence MSc

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Abstract

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Acknowledgements

I would like to thank my supervisor.....

1 Introduction

1.1 Project Aims, Objectives and Introduction

It gives a basic backgroud of the work. The problems and project objectives should be clearly stated. The techniques and approaches used to deal with the problem should be stated with reasons, and the contributions and main results achieved should be stated clearly. The structure of the report can be described briefly at the end.

1.2 Background and Literature Survey

It gives an overall picture about the work with a clear review of the relevant literature. The background of the project should be given. What have been done to deal with the problem should be stated clearly. The pros and cons of various existing algorithms and approaches should be stated as well. Differences between your proposed method and the existing ones should be briefly described.

The following links may help on the literature review: IEEE Xplore digital library: a resource for accessing IEEE published scientific and technical publications (You must be with King's network to get access to the digital library) ScienceDirect.com: an electronic database offering journal papers not published by IEEE (You must be with King's network to get access to the database)

2 Background Theories

2.1 Argumentation Theory - Basics

Fundamental mechanism, humans use in argumentation, and exploring ways to implement this mechanism on computers.

- developing a theory for argumentation (central notion is the acceptability of arguments)

- correctness of this theory (most approaches to nonmonotonic reasoning in AI and logic programming are special forms of this theory of argumentation)

- appropriateness of this theory (illustrates how our theory can be used to investigate the logical structure of many practical problems)

Mostly based on Dung[1]. Biggest difference: we argue with inconsistent SKB so defeasible argumentation.

Liao [2, Chapter 2] provides the same semantic of argumenatation. jsut introducing extension based and labelling based approach. Pointing out difference and

2.2 Argumentation Theory - Working with Preferences in AF

Based on Isabel's second paper[3], based on Extended Argumentation Framework[4], using preferences as arguments for attacks on the attack-relation in the original argumentation. Distinguishing to Amgouds's[5] Preference based Argumentation Framework.

2.3 Source paper

Short summary of Isabels paper [6]. Focus on argumentation theory behind it and model selection process. Preferences expressed as attacks on the attacks between the arguments for models.

2.4   Related work

- Argumentation for Aggregating Clinical Evidence [7]: multiple outcome indicators, checks only old date, not supposed data for recommendation, focuses on generation of arguments out of evidence

- An argument-based approach to reasoning with clinical knowledge[8]: Focus on simple language representing the results of clinical trials, doesn't deal with preferences of different priorities.

- In Argumentation for Decision Support[9] an approach using values in the AF is presented, where $A2$ defeats $A1$ iff $A2$ attacks $A1$ and $val(A2) \nsucc_a val(A1)$ which is not applicable as no strict partial order given.

References

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[7] A. Hunter and M. Williams, "Argumentation for aggregating clinical evidence," in *Tools with Artificial Intelligence (ICTAI), 2010 22nd IEEE International Conference on*, vol. 1, pp. 361–368, Oct 2010.

[8] N. Gorogiannis, A. Hunter, and M. Williams, "An argument-based approach to reasoning with clinical knowledge," *International Journal of Approximate Reasoning*, vol. 51, no. 1, pp. 1 – 22, 2009.

[9] K. Atkinson, T. Bench-Capon, and S. Modgil, *Database and Expert Systems Applications: 17th International Conference, DEXA 2006, Kraków, Poland, September 4-8, 2006. Proceedings*, ch. Argumentation for Decision Support, pp. 822–831. Berlin, Heidelberg: Springer Berlin Heidelberg, 2006.

Declaration

I declare that this thesis is the solely effort of the author. I did not use any other sources and references than the listed ones. I have marked all contained direct or indirect statements from other sources as such.

Neither this work nor significant parts of it were part of another review process. I did not publish this work partially or completely yet. The electronic copy is consistent with all submitted copies.

Signature and date: