Ottimizzazione dei Garanti accademici

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(MM: TODO list (da rimuovere piu' avanti))
(MM:

- Modificare il nome del progetto su github e nel container docker da pd-project a ottimizzazione-garanti-accademici

)

Abstract

Questo lavoro presenta un'analisi e implementazione di un sistema automatizzato per l'assegnazione dei garanti ai corsi universitari, in conformità ai requisiti ministeriali. L'obiettivo principale è garantire che ogni corso soddisfi i vincoli minimi di docenza, rispettando le regole di distribuzione tra diverse categorie di docenti e ottimizzando l'uso delle risorse disponibili.

Utilizzando la programmazione logica con Answer Set Programming (ASP) (Lifschitz, 2002), abbiamo modellato il problema attraverso fatti, regole e vincoli derivati dai dati ministeriali e universitari. Abbiamo implementato una serie di vincoli per rispettare i minimi richiesti di docenti per corso, evitando sovrapposizioni improprie tra gli incarichi dei docenti e considerando scenari realistici in cui un docente può assumere più ruoli parziali.

L'approccio è stato testato su un dataset reale contenente informazioni su corsi, SSD (Settori Scientifico-Disciplinari) e docenti dell'Università degli Studi di Parma. I risultati dimostrano come il sistema possa trovare configurazioni ottimali che soddisfano i requisiti, massimizzando l'efficienza e mantenendo flessibilità nell'assegnazione dei docenti.

1 Introduction

(MM: Questa e' la mia macro per i commenti)

2 Pre processing

(SC: Usa questa macro per scrivere commenti)

When submitting manuscripts using LaTeX, a PDF file must also be included. Articles should be between 6,000 and 10,000 words, encompassing all text, tables, and figures. A concise and descriptive title must be included, and it is essential to list all contributing authors in the submission, along with their email addresses, names, and affiliations.

2.1 Subsection 1

Ensure headings are concise and clearly indicate the hierarchy. Use sparingly and identify with consecutive numbers in square brackets. Submit figures (such as Figure 1 electronically at the highest resolution. Number figures consecutively with clear captions.

2.2 Subsection 2

Emerald Publishing accepts formats such as .ai, .eps, .jpeg, .bmp, and .tif. Electronic figures created in other applications should be provided in their original formats. Additionally, these figures should either be copied and pasted into a blank MS Word document or submitted as a PDF file.

Figure 1: Una padella

3 ASP

In the *Introduction*, you should start by providing background and context for your study, highlighting the importance and relevance of the topic. Then, clearly identify the research problem or gap in your study's existing literature, explaining why it is significant. State the research questions or objectives your study aims to answer, ensuring they are directly linked to the identified problem. Justify the need for your research by discussing its potential contributions or impact on the field. You may also include a brief overview of the methodology, especially if it's novel or crucial to your study's contribution. Additionally, define the scope and limitations of your research, clarifying what the study will and will not cover. If applicable, present your main thesis statement or hypothesis. Optionally, you can conclude the introduction with a brief outline of the paper's structure to guide the reader.

4 Esempio giocattolo

In the *Introduction*, you should start by providing background and context for your study, highlighting the importance and relevance of the topic. Then, clearly identify the research problem or gap in your study's existing literature, explaining why it is significant. State the research questions or objectives your study aims to answer, ensuring they are directly linked to the identified problem. Justify the need for your research by discussing its potential contributions or impact on the field. You may also include a brief overview of the methodology, especially if it's novel or crucial to your study's contribution. Additionally, define the scope and limitations of your research, clarifying what the study will and will not cover. If applicable, present your main thesis statement or hypothesis. Optionally, you can conclude the introduction with a brief outline of the paper's structure to guide the reader.

5 Valutazione sperimentale

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problem. Justify the need for your research by discussing its potential contributions or impact on the field. You may also include a brief overview of the methodology, especially if it's novel or crucial to your study's contribution. Additionally, define the scope and limitations of your research, clarifying what the study will and will not cover. If applicable, present your main thesis statement or hypothesis. Optionally, you can conclude the introduction with a brief outline of the paper's structure to guide the reader.

6 Conclusion

A strong *Conclusion* typically encompasses several essential elements. It begins with a restatement of the thesis or main idea, reinforcing the core message of the paper. This is followed by a summary of the key points discussed throughout the text, which helps to consolidate the main arguments. The conclusion should also include final thoughts or reflections on the topic, providing a thoughtful discussion wrap-up. (**fellows˙research˙2021**)

Acknowledgments

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References

Lifschitz, Vladimir (2002). "Answer set programming and plan generation", *Artificial Intelligence*, Vol. 138 No. 1. Knowledge Representation and Logic Programming, pp. 39–54. ISSN: 0004-3702. DOI: https://doi.org/10.1016/S0004-3702(02)00186-8. **available at**: https://www.sciencedirect.com/science/article/pii/S0004370202001868.