

Exposé

outlining a Master Thesis on:

Semantic approaches to scientific citation recommendation (tentative title)

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1. INTRODUCTION

This exposé will outline a prospective Master Thesis in the area of scientific citation recommendation and argue for its value. The approach will encompass the creation of a dataset and development of supervised learning methods with a focus on semantic analysis of citation contexts. Evaluation of the resulting implementation will follow the most prevalent methods in the field.

The remainder of this document is structured as follows. Section 2 will provide some theoretical background on relevant areas and give a quick overview of related work. A detailed description of the planned methodology and approach will be given in section 3; followed in section 4 by an outline of the planned evaluation. Section 5 and 6 conclude the exposé by listing the foreseen contributions of the Thesis and a proposed schedule.

2. BACKGROUND

foo

2.1 Related work

- survey stuff (take more narrow look) - wiki page news article papers (for entity stuff)

3. METHODOLOGY AND APPROACH

foo bar MAG[7][3][4][8] entity[6] claim[5] argument[2]

4. EVALUATION

foo bar

5. CONTRIBUTIONS

- apparently semantic stuff not very explored (cite survey if possible, look at tables) - creation of another nice (exact citation markers, large citation context, etc.) dataset like gold standard paper[1] - a nice dataset like gold standard paper[1] but not restricted to CS domain

6. SCHEDULE

7. REFERENCES

- [1] M. Färber, A. Thiemann, and A. Jatowt. A High-Quality Gold Standard for Citation-based Tasks. In *Proceedings of the 11th International Conference on*

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- [4] S. E. Hug, M. Ochsner, and M. P. Brändle. Citation analysis with microsoft academic. *Scientometrics*, 111(1):371–378, Apr 2017. r.
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- [6] A. Mishra and K. Berberich. Leveraging semantic annotations to link wikipedia and news archives. In N. Ferro, F. Crestani, M.-F. Moens, J. Mothe, F. Silvestri, G. M. Di Nunzio, C. Hauff, and G. Silvello, editors, *Advances in Information Retrieval*, pages 30–42, Cham, 2016. Springer International Publishing. r (ch 1-3).
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- [8] A. Sinha, Z. Shen, Y. Song, H. Ma, D. Eide, B.-J. P. Hsu, and K. Wang. An overview of microsoft academic service (mas) and applications. In *Proceedings of the 24th International Conference on World Wide Web, WWW '15 Companion*, pages 243–246, New York, NY, USA, 2015. ACM. r.

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Time frame	Task	Results
Oct 1 – Oct 21	Develop mechanism to generate dataset with citation markers from arXiv source dump	Dataset boilerplate (i.e. with citation markers but no semantic annotation)
Oct 22 – Oct 28	Write exposé	Thesis approval
Oct 29 – Nov 04	Add entity annotations to dataset	Dataset usable for supervised learning
Nov 05 – Nov 18	Develop entity based recommendation approach	-
Nov 19 – Nov 25	Add claim annotations to dataset	-
Nov 26 – Dec 09	Develop claim based recommendation approach	-
Dec 10 – Dec 22	Coordination with simultaneous tangential theses and integration into CiteRec system	-
Dec 23 – Jan 06	break/buffer	-
Jan 07 – Jan 13	Add argument annotations to dataset	-
Jan 14 – Jan 27	Develop argument based recommendation approach and start offline evaluation	-
Jan 28 – Feb 10	Offline evaluation	-
Feb 11 – Feb 24	Online evaluation	-
Feb 25 – Mar 17	Thesis writing	-
Mar 18 – Mar 31	buffer/paper writing	-