

FCA and IR: The Story So Far

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Abstract. The application of Formal Concept Analysis (FCA) to Information Retrieval (IR) is twenty-five years old. Over this period, a number of papers have explored the potentials of FCA for various information finding tasks while several system prototypes have been made available for experimentation and testing. In this talk we survey what has been achieved so far, discussing lessons and implications from a few successful case studies, including browsing of web search results, smooth integration of data driven and model driven search, exploratory document mining, and semantic text classification. We argue that, in spite of these good results, the impact of FCA on mainstream IR has been limited, due to theoretical and practical limitations. Nowadays, the tremendous increase in the richness and diversity of electronic data along with the inherent shortcomings of traditional search engines call for better IR techniques, opening up new opportunities for knowledge-intensive methods. Integration of FCA with existing search technology and new theoretical advances capable of extending the applicability of FCA to IR beyond the Boolean retrieval model are seen as key factors for the further development of this field.