Expertise Search in Academia using Facets

Duncan McDougall, Craig Macdonald
Department of Computing Science
University of Glasgow
Glasgow, Scotland, UK
{mcdougdj,craigm}@dcs.gla.ac.uk

Categories and Subject Descriptors
H3.3 [**Information Storage and Retrieval**]: Information Search and Retrieval.
General Terms
Algorithms, Design.
Keywords
Expert Search, Faceted Search, Terrier

1. SYSTEM OVERVIEW
People search is an important problem, because users often require to identify relevant people rather than documents. For instance, in an academic research setting, researchers may seek other researchers with complementary skills for a given project. People search systems such as Spock [1] and ArnetMiner [2] allow retrieval of people with relevant expertise for a query.
Faceted search is a common feature in shopping websites, (as seen on Amazon and Ebay), where the results are grouped into a number of categories, typically including result counters. This allows users to drill down to the particular aspects of the results that interest them most.
In expert search, the presentation of the retrieved expert person is important, as users need to judge on whether to contact a given expert using the presented evidence. In this demo, we present a novel faceted search interface for a people search engine, allowing results to be broken down by facets such as university, and number of publications. It is of note that no other expert search engine provides a faceted interface for result exploration.
AcademTech is a computing science-specific expert search engine based on the Terrier IR platform [3]. Persons working at computing science departments in Scottish universities are considered as candidate experts by the system. Profiles of their expertise evidence are then mined from their homepages and publications retrieved from DBLP [5]. Using the expertise evidence, experts are ranked using the expCombMNZ voting techniques from the Voting Model [3]. Pre-determined facets, such as geographical location, university and publication count, are recorded during indexing. User queries return a ranked list of persons, into which the user can browse and explore by using the facet options. The system demonstrates faceted search for academics by presenting refinement options using university, location and total publication range categories. The profile page for a person, linked from the result page, gives contact information, publications, as well as webpage and image search results provided by the Yahoo! BOSS API.
Figure 1 presents a typical scenario where faceted search is useful with an expert search. Here a search for information retrieval experts can be refined to only show experts located in Glasgow, with further refinement possible. Future work will investigate the selection of appropriate facets to display on a per-query basis.

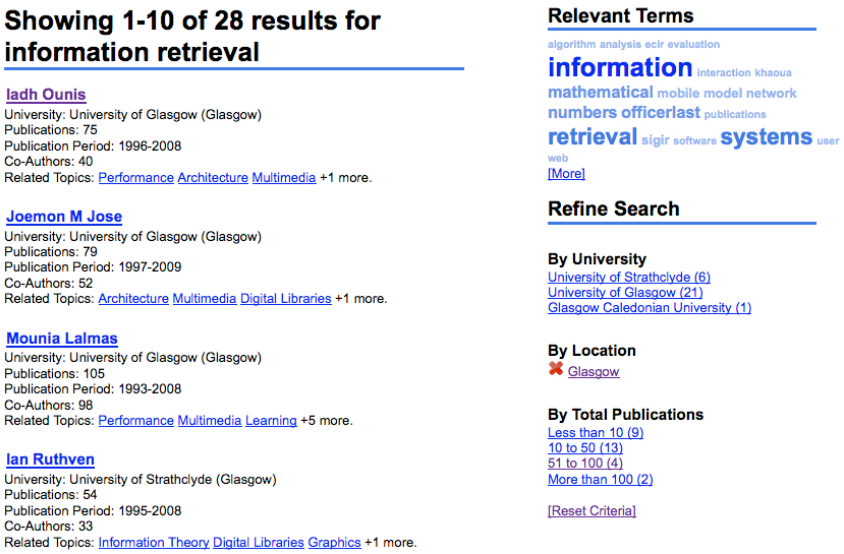

Figure 1: Results for the query 'information retrieval'. The user has then refined the query using the Glasgow location from the facet search options.

2. REFERENCES
[1] Spock Website: http://www.spock.com/
[2] ArnetMiner Website: http://www.arnetminer.org/
[3] C. Macdonald. *The Voting Model for People Search*. PhD thesis, Univ. of Glasgow, 2009.
[4] I. Ounis, G.Amati, V.Plachouras, B. He, C. Macdonald, and C. Lioma. Terrier: A High Performance and Scalable Information Retrieval Platform. In *Proceedings of OSIR Workshop at SIGIR'06*, 2006.
[5] DBLP Website: http://www.informatik.uni-trier.de/~ley/db

Copyright is held by the author/owner(s).
SIGIR'09, July 19–23, 2009, Boston, Massachusetts, USA.
ACM 978-1-60558-483-6/09/07.