The main notion of my PhD topic is the principled utilization of contextual evidence within the IR process. And as such, we view implicit measures as contextual information and of vital use in improving the quality of the retrieval process.

Our interests lie predominately in developing a statistical model for inferring the relevance/non-relevance of a page through modelling the length of time a user spends viewing a document/document summary. Previous studies [1, 2, 3] have shown that the time spent on a page is highly correlated with the relevance of a document, and in an operational setting implicit feedback can be used as an excellent substitute for explicit relevance feedback.

Using such implicit feedback along with explicit feedback, a user language model will be developed in order to create a personal profile. This model will then be integrated into a formal retrieval model such as the two stage language modelling framework proposed in [4]. Here the user’s language model will be assumed responsible for query generation and as such will provide the means to create a ‘smoothed’ version of the query.

Aside from developing a formal framework to embed such information, we believe that the robustness of inferences made using implicit measures is questionable. Certainly one can always think of a situation when an inference based off an implicit indicator may not be valid. And as such feel it is vitally important to design suitable experiments for the validation of such inferences and determine the limitations and operational usefulness of inferences based on such measures.

REFERENCES


E-mail address: leif.azzopardi@paisley.ac.uk

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1I am 2nd year PhD Student at Paisley University, Glasgow, where I am studying Context in Information Retrieval. My Supervisors are Mark Girolami and Keith van Rijsbergen.