Research Group Strathclyde - iSchool Meeting Attendance

Alexandros Ioannidis

2017

Dept. Computer and Information Sciences

University of Strathclyde

12/25/2017



1. **1 hour *09/10/2017***

**Title:** A Study of Snippet Length and Informativeness: Behaviour, Performance and User Experience  
  
**Abstract:** In this talk, I'll be discussing how user behaviour, performance and experience are affected when the length of result summaries are varied. I will report on the study we conducted, where Kullback-Leibler distance was used as a measure of information gain. We examined different lengths of result summary and selected four conditions where the change in information gain was the greatest: (i) title only; (ii) title plus one snippet; (iii) title plus two snippets; and (iv) title plus four snippets. Findings show that participants broadly preferred longer result summaries, as they were perceived to be more informative. However, their performance in terms of correctly identifying relevant documents was similar across all four conditions. Furthermore, while the participants felt that longer summaries were more informative, empirical observations suggest otherwise; While participants were more likely to click on relevant items given longer summaries, they also were more.

1. **1 hour  *16/10/2017***

**Talk Title:** A Semantic Graph based Topic Model for Question Retrieval in Community Question Answering  
  
**Abstract:** Community Question Answering (CQA) services, such as Yahoo! Answers and WikiAnswers, have become popular with users as one of the central paradigms for satisfying users’ information needs. The task of question retrieval aims to resolve one’s query directly by finding the most relevant questions (together with their answers) from an archive of past questions. However, as the text of each question is short, there is usually a lexical gap between the queried question and the past questions. To alleviate this problem, we present a hybrid approach that blends several language modeling techniques for question retrieval, namely, the classic (query-likelihood) language model, the state-of-the-art translation-based language model, and our proposed semantics-based language model. The semantics of each candidate question is given by a probabilistic topic model which makes use of semantic graphs for capturing the hidden interactions among entities (e.g., people, places, and concepts!) in question-answer pairs. The experiments show that the development of question search technologies based on topic modeling and knowledge-rich approaches can lead to more effective and efficient systems.

1. **1 hour *23/10/2017***

**Title:** "Exploring causal relationships between Information Behaviour and Social Capital”  
  
**Abstract:**   
This research is to investigate the causal relationships between information behaviours and social capital. The aims of the research are to investigate the information seeking behaviours and the Social capital to find how they influence each other. The methodology approached qualitatively. The data collection instruments are semi-structure interviews and focus groups. Subjects of the study are Muslim individuals from both genders, who are chosen from 10 Islamic community centres and age between 18 and 45 years old, who also, moved to Glasgow from overseas within the last 5 years. The data is interpreted based on thematic and narrative analysis through the lens of a theoretical framework.

1. **1 hour *30/10/2017***

**Title:** Simulating Interaction for Evaluation by Dr. Leif Azzopardi

**Abstract:** Search is an inherently interactive, non-deterministic and user-dependent process. This means that there are many different possible sequences of interactions which could be taken (some ending in success and others ending in failure). Simulation provides a powerful tool for low-cost, repeatable and reproducible evaluations which explore a large range of different possibilities - and enables the analysis of IR systems, interfaces, user behaviour and user strategies. To run a simulation, a model of the user is formalised, and then used, for example, as the basis of a metric, to create a test collection, or generate interaction data.  In this talk, I will give an overview of various methods that we have developed in order to: (1) create simulated test collections which enable more extensive evaluations, as well as enable the evaluation on new collections without the expense of costly user judgements, and (2) create user interaction data, which enables a range of different user strategies/behaviours to be compared and contrasted in a systematic manner.

1. **1 hour 06*/11/2017***

**Title:**Natural Language & Speech Processing for Virtual Assistants **Description:**This presentation summarizes a 6 months internship that took place within the Human Factor department of the Airbus Company in Toulouse, France. This internship was centred on a virtual agent research thematic. Our initial hypothesis was that a system of automatic intent categorization could benefit from using synthetic “natural-like” data. In order to validate or invalidate this hypothesis we decided, first, to create a methodology that would help us collect natural questions from end-users. Then we used the “natural” data we previously collected along with a synthetic question generator we designed in order to output synthetic questions that feels “natural-like” if compared to the input ones. Lastly, we experimented on the synthetic datasets using various tools in order to put to the test our initial hypothesis. The results we obtained from these tests allowed us to open new perspectives on the natural language understanding part of the virtual agent system.

1. **1hour *20/11/2017***

**Title:** Exploring the cultural intermediary role of public libraries within disadvantaged communities by Sarah Sweeny

**Topic:** The topics covered on this presentation,

**Title:**  What stops people from talking to machines?

**Topic:** Despite significant improvements in automatic speech recognition and spoken language understanding - human interaction with virtual personal assistants (VPAs) through speech remains irregular and sporadic. Currently, the usage of VPAs is constrained to basic tasks such as checking facts, playing music, and obtaining weather updates. In this work, we investigate the factors that affect the adoption of VPAs to understand what prevents people from speaking to their phones, tablets and household devices. To this end, we conduct a survey (N = 178). The results indicate that main reasons for dissatisfaction with VPAs are little support for natural language conversations, lack of memory of past interactions, and insufficient personalisation of assistance.

**1hour - Title:** David Maxwell’s PhD thesis topic in the University of Glasgow 15:00 – 16:30

**Topic:** Themes covered include the following, rough path incredibly useful for time series data, MSFT extending ESig and exposing functionality of ESig to Python, Project -> Simplifying the installation, “pip install esig (Python C++ compiler)” a suite of tools to automatically build python wheels for different platforms (versioning, make source, make, wheels, upload**),** AMT crowdsourced user study, participants = 53, quality controls were considered, 4 topics + 1 topic (practice + familiarise the user), 10mins/topic, ad-hoc topic retrieval task, snippets typically now query-biased, snippets scored against BM25, does information gain informativeness per word, Also as results increased the more informative they become and an increase in time spent for examination of the snippet fragments is also noticeable, all four interfaces tested had similar performance, examination of stopping depth per query, as snippets length increase subjects examined to shallower depths of SERPs, interaction probabilities (clicking a result summary and marking a document), as length of snippets increases the number of words also increases, traditional SERP components aspects such as: likelihood of clicking item, summary length, interaction times were also analysed. Study conclusion: 1) users said longer snippets are preferable but still they don't perform well with those, 2) paradox of choice, 3) user overwhelmed by the number of snippets to choose, 4) less is more, 5) quality of long snippets wasn't evaluated however (making it difficult to assess), different visualisation heights in the interface to be explored in the future.

1. **1hour *27/11/2017***

**Title:** ‘A digital world for all?’

**Speaker:** Anna Grant, Carnegie, UK

**Abstract:** Young people are not digital natives. Those who are vulnerable, particularly those at points of transition in their life (including unemployed, homeless, in secure accommodation, excluded from mainstream education) are most at risk of slipping through the net and falling outside the digital mainstream. #NotWithoutMe was launched in late 2015 to identify a number of new projects, each testing innovative engagement techniques, designed to improve digital inclusion and increase digital skills among vulnerable young people. During 2016-17, Carnegie UK supported four projects, delivered by Mencap in Northern Ireland, Signal Film and Media, The Pavilion, Young Scot and The Prince’s Trust. Local projects in Glasgow, Cumbria, Belfast and London saw 100 vulnerable young people get involved to improve their online literacy skills. A digital world for all? is the summary report from the first phase of the #NotWithoutMe programme. It details each of the four case studies, findings and recommendations. Topics included measurement of online skills development, assumptions around skill levels, challenges with basic literacy skills, role of the support network and opportunities of co-production.

1. **1hour 04*/12/2017***

**Title:** Information retrieval and machine learning for conducting empirical systematic reviews

**My presentation**

1. **1hour 11*/12/2017***
2. **1 hour 3 - 4 pm. Friday, September 29th 2017**

**University of Glasgow, SAWB 422**

**Title:** Integrating the Framing of Clinical Questions via PICO into the Retrieval of Medical Literature for Systematic Reviews

**Abstract:** The PICO process is a technique used in evidence based practice to frame and answer clinical questions. It involves structuring the question around four types of clinical information: Population, Intervention, Control or comparison and Outcome. The PICO framework is used extensively in the compilation of systematic reviews as the means of framing research questions. However, when a search strategy (comprising a large boolean query) is formulated to retrieve studies for inclusion in the review, PICO is often ignored. This presentation evaluates how PICO annotations can be applied and integrated into retrieval to improve the screening of studies for inclusion in systematic reviews. The task is to increase precision while maintaining the high level of recall essential to ensure systematic reviews are representative and not biased. Our results showed that restricting the search strategies to match studies on the basis of PICO annotations does improve precision compared to a non-PICO baseline (while maintaining similar, although reduced recall). The implication of this study is that the development of search technologies based on these annotations can lead to both time and cost savings when compiling systematic reviews.