Master Thesis Proposal

Click Models to Estimate Relevancy Ratings from Users Interactions

Company Profile
Sease mission is to make research in Information Retrieval more accessible to an industry audience, transforming the best research principles, ideas and implementations from academia into real world products. Focus of the company is to provide R&D projects guidance and implementation, search consulting services and training using open source software such as Apache Lucene/Solr and Elasticsearch.

Introduction:
For a business heavily based on search engines is hard (and extremely valuable) to estimate which documents of their corpus are relevant for their information needs. Rated Ranking Evaluator (RRE) is a search quality evaluation tool that queries a target search engine and produces a report with state of the art evaluation metrics. To perform such evaluation it is necessary to build a ground truth beforehand, a rating set that associates a relevance score to a pair <query, document>.

Thesis
Focus of the Thesis is to design and implement a module in RRE-Enterprise that is able to process the collected users interactions, generate a probabilistic model and estimate the relevance ratings.

Requirements: Students enrolled in the master degree in Computer Engineering have the priority + Course of Information Retrieval

Main responsibility of the candidate will be to:
• learn basic concepts of Agile methodologies for software engineering
• learn details of Search Quality Evaluation
• grasp the fundamentals of click modelling, implicit and explicit relevancy feedback
• design and implement the module in an existing Spring Boot REST service application
• benchmark the solution(s) through a careful quality/performance(times/space) analysis

Location: no requirements in terms of working hours or location, the student can work flexibly from its own premises or at the University Labs

Duration: 5/6 Months
Period: from October to February/March

Benefits: Expenses + a paid visit to London for an Information Retrieval meetup