Master in Artificial Intelligence (UPC-URV-UB)

Master's Thesis Proposal[1]

General Information

Title:	Event recommendation on twitter
Expiry Date:	
Modality:	☐ X technological project ☐ X research work
Advisor/s:	Ricard Gavaldà
Advisor's Dept. & Univ.:	LSI / UPC
Advisor/s e-mail:	gavalda@lsi.upc.edu
Observations:	
Student's Name: (if already known)	Alberto Lumbreras Carrasco

M.Sc. Thesis Description

Main issues / Brief Description [Mandatory]:

The goal of this project is to study recommender system techniques applied to event recommendation on the Twitter social network.

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[1] **Each M.Sc. Th. Proposal should be in a separate file, named as follows: "MSc-Th-Proposal-2-or-3-title-first-words-Advisor/s-AcademicYear.pdf".**

For Example: "MSc-Th-Proposal-Syntactic-and-Semantic-LluisMarquez&JesusGimenez-1011.pdf"

The proposal could be elaborated with any text processor (Word, Openoffice, etc.), but **the file electronically delivered** to LSI Dept. Secretary (merce@lsi.upc.edu) **MUST BE a single PDF file**

Detailed Description including a task planning [Mandatory]:

Our work is focused on New Event Detection and event recommendations on Twitter, the most popular micro-blogging network.

As for New Event Detection (NED), there has been a lot of research in the area. In NED research an event is defined as a general concept that spans from a very commented piece of news to a popular concert. Our interest is on a special kind of events defined as one that the user can attend such as concerts, conferences or movies. Detecting these events cannot be based on detecting broad trends, but must rely on analyzing what people say and classifying the sentences (tweets) as events or non- events. We will study whether events can be accurately detected and which are the best methods for this aim.

There is a huge amount of big and small events that people talk about on Twitter. That opens news opportunities for recommender applications. Recommending systems can follow three different approaches: Collaborative Filtering (CB), Content Based (CB), or Social Recommendations based on trust (SR). Although the two first are the most explored, the third tries to take advantage of the information inherent to the social network. By computing new factors such as trust among users and applying this information to classical methods, accuracy on recommendations can sometimes be improved [1,2,3].

We will develop a recommendation system for twitter that crawls the information needed and recommend events to users. The goal is to test how good accuracy can be in this scenario, and compare different recommendation approaches as well as how social network information such as trust (or influence) can improve the recommendations.

References [Mandatory]:

[1] Thomas DuBois, Jennifer Golbeck, John Kleint, Aravind Srinivasan. 2009. *Improving Recommendation Accuracy by Clustering Social Neworks with Trust*. Proceedings of the ACM RecSys 2009 Workshop on Recommender Systems and the Social Web. October 2009, New York, New York.

[2] Paolo Avesani, Paolo Massa, and Roberto Tiella. *Moleskiing.it: a trust-aware recommender system for ski mountaineering.* International Journal for Infonomics, 2005.

[3] Jennifer Golbeck. *Generating predictive movie recommendations from trust in social networks.*In Proceedings of the Fourth International Conference on Trust Management, 2006

Minimal Requirements & Previous Knowledge [Optional]:

Other comments [Optional]:

Location and Date: Barcelona, March 17th, 2011

To the Academic Commission of the Master in Artificial Intelligence (CAIMIA)