

# Inferring User Interests in the Twitter Social Network

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# 1. Overview

• How to find the topics of interest of a Twitter user? • Intuition: Users follow experts on their topics of interest • Novel method to infer user interests at scale • Live system to infer interests for all active Twitter users • Comparison against state of the art shows superiority

# 2. Motivation

• Inferring interests a prerequisite for recommendation • Most current methods use content of Tweets for interests •We use local network structure and social annotations •Our methodology is robust towards scaling issues

# 3. Lists contain cues of user expertise







Alan created a list RecSys2011 to organize RecSys conference related users. In doing so Alan has given us cues, that these users are related to RecSys.



Alan Said

@alansaid



#### Asst. Prof. Computer Science @txst (tweets my own). #RecSys, #HCI, develops @LensKitRS. User-loving zealot. Self-propelled. Anyone seen my towel? Quercia @ Yahoo Labs @danielequercia http://researchswinger.org, promiscuous (cross-disciplinary) researcher with few exes: ex-UCL,-@MIT, -@Cambridge\_Uni. Astonishingly, views are my own.

Ido Guy @ido\_guy

Principal Research Engineer, Yahoo Labs

### 4. We curate lists from many sources to capture expertise

Xavier is member of a number of lists created by different users named RecSys. We can conclude with some confidance that Xavier is likely an expert in the area.

If one is included in many lists on the same topic, one is likely to be an expert on the topic.

RecSys2012 by Alan Said	
413 Members	
RecSys by Alejandro Bellogin	
219 Members	
RecSys by Michael Ekstrand	
38 Members	
RecSys by Sandra G-Esparza	
22 Members	





## 5. We infer user interests from the expertise of users they follow

Michelle follows a number of known experts on interior design and retail shopping. So we can conclude that Michelle is likely interested in the topics of interior design and shopping.

If one is following many experts on the same topic, one is likely to be interested in the topic.



furniture news fashion publications business gardenlifestyle brands cerior design shopping

#### Interests for Michelle Zhou

## 6. Evaluation

• Compared with interests obtained from user bio • Our method captured user interests when available • Compared with interests obtained from Labeled-LDA on Tweets •10 volunteers compared interests obtained by the two methods •Our method was judged more accurate and complete in 9/10 cases

# 7. Key Insights

• Social signals can be a better alternative to content based methods for interest inference

• Interests are passive traits which may not be visible in Tweets posted by the user

•Our system can be used as a platform for developing personalized recommendation systems in Twitter



twitter-app.mpi-sws.org/who-likes-what