Social Analytics

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Areas of Research & Key Projects

Social and Organisational Network Analysis

• Key Influencer Identification using Social Network Analysis

Social Movements

• Interplay between social movements and social media and their organisational implications
Social Network Analysis

Key Influencer Identification among Customers using Social Network Analysis
Organisational Implications

- Information flows in social networks
- Role of social networks in groundswell movements
- Identify communities & groups in social networks
- Analyse real-time social networks data for better decision support
- Leverage organisation networks for analysing performance
- Predictive analytics for better forecasting
Social, Organisational Network Analysis

• Objectives

• Conduct research and develop solutions so that enterprises can at real-time monitor end user networks and thereby enhance their decision making ability.

• We leverage Social Network Analysis to draw inferences and critical insights about customer preferences and engage with them.

• Enable enterprise decision makers by providing them with the right social media metrics that will influence their strategy, products, services, brand etc.

• Real time analysis of data from social networks

• Support real-time decision making
Social, Organisational Network Analysis

• Research Overview
  • Identify key influencers in organisational and social networks using techniques such as Social Network Analysis and Organisational network Analysis

• Research Problems
  • Who are the key influencers in a social network? What are their attributes?
  • How does the role of a key influencer evolve in a social network?
  • What are the variables using which we can identify and measure key influencers in a social network?
  • How do network structures and positions change over time?
Enterprises need to identify key influencers in their network as well as identify their role.

User/customer generated information could provide key insights which will aid decision making.

Need for an Informal listening board.
Key Contributions

• Real time identification of key influencers
  • Enterprise users need real-time identification of influencers to complement their online social media strategy.
  • The research satisfies this important requirement of end users.
• Context based identification of key influencers
  • The user and message context is key and forms the basis of the algorithm
  • This presents the end user with targeted results and recommendations.
Key Contributions

• Ability for end users to modify the weightage of context factors
  • The end user can allocate and modify weightages to multiple related contexts to
    fine tune the end results and thereby identify related influencers.

• Extensibility
  • We can mine and analyzes different participative spaces such as Twitter and
    Facebook
  • This allows users to customize and extend for new social networking destinations.
  • Different spaces have different models of user participation and interaction and
    hence require a unique method of analysis.
Social Movements

Interplay between social media and traditional media in shaping Social Movements: Analysis of Social Movements in India, Egypt & the US
Social Movements

• Research Overview
  • Identify key entities in groundswell social movements

• Research Problems
  • Who are the key entities in social movements? What are their attributes?
  • How does the role of a key entity evolve in a social movement?
  • What are the variables using which we can identify and measure key entities in social movements
  • How do network structures and positions change over time?
  • How can we leverage information diffusion to percolate information about our products into the market?

• Objectives
  • Real time analysis of data from social movement networks
  • Understand the emergence of groundswell support for products
  • Monitoring viral campaigns
### Representation

<table>
<thead>
<tr>
<th>Tweeter</th>
<th>Tweet</th>
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<tbody>
<tr>
<td>@A</td>
<td>@B <em>I think you are right</em> #hashTag</td>
</tr>
<tr>
<td>@A</td>
<td>@D <em>You are not correct, I think</em> #hashTag</td>
</tr>
<tr>
<td>@B</td>
<td><em>Whoa!, I agree too RT</em> @E <em>yes, it is true!</em> #hashTag</td>
</tr>
<tr>
<td>@C</td>
<td><em>I think</em> #hashTag <em>is attributed to</em> @D</td>
</tr>
<tr>
<td>@D</td>
<td><em>Man @E what a thought!</em> #hashTag</td>
</tr>
<tr>
<td>@E</td>
<td><em>Dude @D. Chill! RT@D Man @E what a thought!</em> #hashTag</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Destination</th>
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<td>A</td>
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Overview

• The Anna Hazare movement was Tweeted with two prominent hashtags #annahazare and #janlokpal
• The data used for our Social Network Analysis included Tweets with the hashtag #annahazare
• We analysed about 25,000 tweets between Aug 24 2011 and Oct 08 2011.
• The final data used for analysis had 7365 nodes and 14,666 edges
• The network analysis and visualization program Gephi, the open-source graph visualization and manipulation software was used for the analysis.
• Each node in the graph represents a Twitter id and the edges or the connections represent the interaction pattern across these nodes
#AnnaHazare Analysis - Network
#AnnaHazare Analysis – All vs Media

All Tweets versus Media Tweets during #AnnaHazare

All Tweets

Media Tweets

Timeline between Aug 17 2011 to Oct 8 2011
#iSupportAnnaHazare Analysis - Network
#iSupportAnnaHazare Analysis – All vs Media
#janLokpal Analysis - Network
#janLokPal Analysis – All vs Media

All Tweets versus Media Tweets for #janLokPal

TimeLine between 12th Sep 2011 and 6 Dec 2011
#OccupyWallStreet Analysis - Network
#OccupyWallStreet Analysis – All vs Media

Media Tweets versus All Tweet in #occupyWallStreet

- All Tweets
- Media Tweets

TimeLine between 26th July and 18th September (Occupy Wall Street Protest happened on 17th September)
#Tahrir Longitudinal Analysis – Network (15-Nov)
#Tahrir Longitudinal Analysis – All vs Media (15-Nov)
#Tahrir Longitudinal Analysis – Network (16-Nov)
# Tahrir Longitudinal Analysis – All vs Media (16-Nov)

- 16-Nov All
- 16-Nov Media
#Tahrir Longitudinal Analysis – Network (17-Nov)
#Tahrir Longitudinal Analysis – All vs Media (17-Nov)
#Tahrir Longitudinal Analysis – Network (18-Nov)
#Tahrir Longitudinal Analysis – All vs Media (18-Nov)

- 18-Nov All
- 18-Nov Media
#Tahrir Longitudinal Analysis – Network (19-Nov)
THANK YOU