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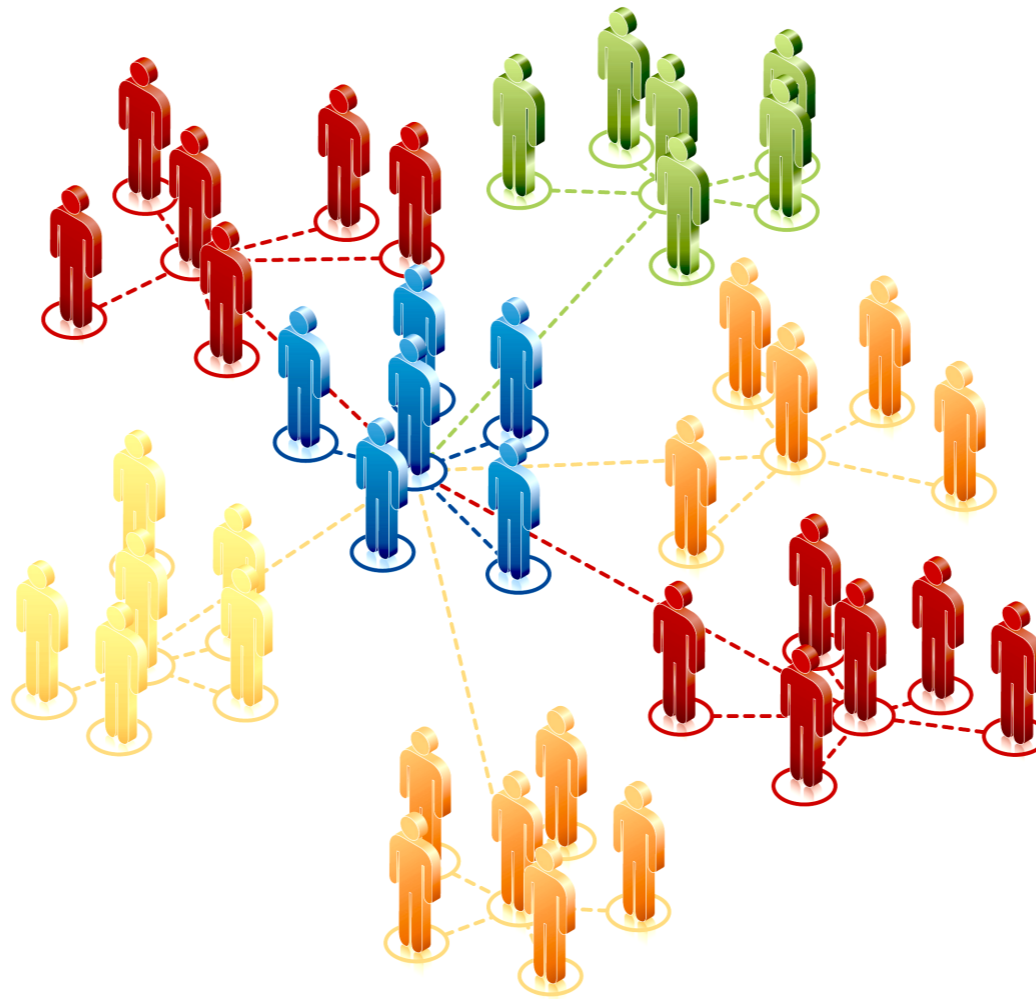
FOR ALL THE
SOUP
BOYS

WHY
THIS
KOLAVERI
DI

PA PA PA PPAAN...
PA PA PA PPAAN....
PA PA PA PPAAN...PA PA PPAAN

Why and How did *Kolaveri Di* go viral?

A Marketing and Social Analytics Project
by Jaehyun and Wei Yin



**Understanding the virality
through network analysis**

Dataset

	AuthorName	TweetContent
1	carlosmorett	@whykolaveridi : Why this kolaveri di - talking tom - Full Song http://t.co/dxXELEa7 #CancionesQueEscuchariaMilVeces
2	immhemant	Trying hands at singing.. Who knws I can also end up with smthng lyk kolaveri ..;) http://t.co/yYvoXnOo http://t.co/us7uGvVv
3	mahnoorbabes	white'a skin a girla girla Girla heart a blackkkkaWHY THIS KOLAVERI KOLAVERI KOLAVERI A DI
4	nagunagu	Boys singing kolaveri http://t.co/EjmR5qFu
5	officalnb	I've uploded an @YouTube video http://t.co/4StrZujB Why This Kolaveri Di? (FEMALE VERSION) Cover
6	farhaanengar	@SurfrazLobby @tas_deville white-er Skin kolaveri loooooo
7	alvinjiju	I favorited a @YouTube video http://t.co/ud8e6yre Why this kolaveri di ? - chipmunk version.
8	niru1989	I liked a @YouTube video http://t.co/2ZfKTuqH Kamal Haasan Talks About " Why this Kolaveri ..." song
9	whykolaveridi	Why this kolaveri di (Fun Version) http://t.co/cqnGbUIE
10	learn44	Why This Kolaveri Di Full Song Promo Video in HD http://t.co/swdysHCT
11	chennaitvnews1	@sardesairajdeep @iamvshal Why this kolaveri now? The timing is a suspect. Who sponsored the timing.
12	imsaiarasi_ophe	" Kolaveri Di, Whistle Podu and Chammak Challo played a pivotal role in the popularity of Tamil"!!! - Chennai..
13	bereniceakb	Why This Kolaveri Di \u2026Most Popular Song http://t.co/nafY07hF
14	twitterdad	Why this kolaveri di? :(
15	djmylo98	@hollaSheezay why this kolaveri kolaveri kolaveri , shezay mama suda mari suda mari... M.O.D... :)
16	sharhanow	Why dis kolaveri di @justinbieber ?
17	cliche604	Kolaveri Di (Rap Version), Check my new Video featuring James Ferguson. Make sure ta comment/like on Youtube http://t.co/hCw51R6P
18	kristieyung	Yo! @cliche604 - Your video for Why this Kolaveri Di is great. Awesome work on the track too. Glad it worked out w J
19	jennifer_lopez1	Kolaveri stars Why do celebs lose their cool?: NEW DELHI: Celebrities ko gussa kyon aata hai (why do celebrities..
20	hjs_96	Why this kolaveri kolaveri di ?
21	badruddeen	Photo: Why this Kolaveri Di? via @haveeru http://t.co/CR5fFlbN #mvcoup #maldives #mvprotest
22	hhaidery1	Watch "Why This Kolaveri Di (Arabic Version By Faez Choudhary) ORIGINAL!!!" on YouTube http://t.co/gnro1gjc ..
23	xnatashax	Somehow around the madness of crash calls I found myself at one point playing Kolaveri by @ArjunArtist to a room full of doctors lol
24	mohan_dentist	kolaveri di- dentist version http://t.co/lzwLDnhz
25	mohamedfauzan	Kolaveri kolaveri di... Hand u glass u http://t.co/pp5TsnLv via @youtube

**Total of 65,533 tweets related to “Kolaveri Di” from
November 23, 2011 to February 26, 2012**

Data Cleaning

1. Understanding the Data

Author_to (mentioned by Author_from)

	AuthorName	TweetContent
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Author_from (the person who tweets)

Tweets without mentions

1. Understanding the Data

Retweet

RT is followed by a mention (author_to)

msnarain
cacaulicencioso

RT @OmkarDash : Sachin Tendulkar thanks Dhanush for Sachin's Anthem. Gets out at "3". #kolaveri #sorry
I liked a @YouTube video <http://t.co/cf4GYKVh> Why This Kolaveri Di Full Song Promo Video in HD

People can tag @YouTube to indicate that they watched the video via YouTube

2. Data for Network Analysis

Preparation

1. Each follower and followee will become the “node (or vertex)” for the graph.
2. However, @YouTube is to be removed from the list of the nodes, because YouTube is tagged if the Twitter users share the video links on their tweets.
 - Thus, @YouTube has no direct relation with/among the users
3. Company intermediaries (such as @sonymusic or @mtvindia) should be included in the nodes because they have direct relation with their followers.

3. Steps in Cleaning the Data

1. Only the tweets with the mentions are included in the network analysis.

- This is due to the fact that tweets without “@” has no direct relations with other users.

2. The username/s of “author_to” are extracted from the “author_from”’s tweet contents.

3. All the “author_to”s are combined into one list

4. Duplicates are removed. Now we have a clean list of “author_from” and “author_to”

4. Results

(partial) clean list of “author_from” and “author_to”

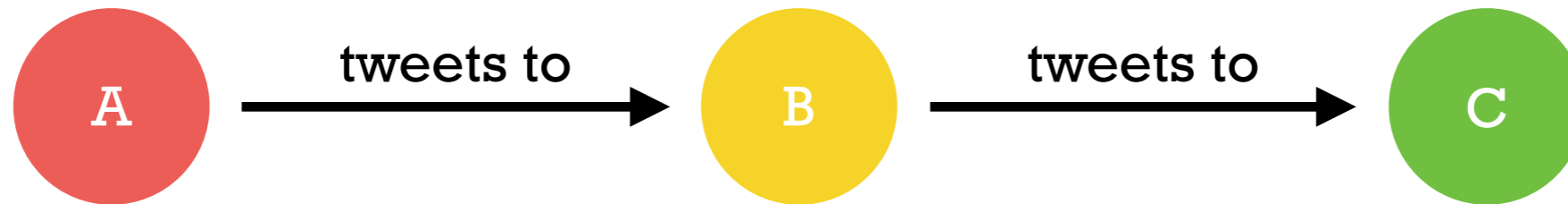
Author_from	Vertex 1	Vertex 2	Author_to
	alka_d	purple_truths	
	all_about_salma	eyecofficial	
	allanfrancis11	headlinesindia	
	allinaquczbu	wordpressdotcom	
	alloftheway	dubsharma	
	alloftheway	smitaprakash	
	almajed_a	soundintensitys	
	almajed_a	s_alhaji	
	almussi	moniquemussi	
	alok_in	addthis	
	alokbhinde	fareedamiah	
	aloke1991	addthis	
	alokpi	churumuri	
	alokpi	danushkraja	
	alokpi	vitalstatistiks	
	alone37	amit_bhojwani	
	alpeshkh	eyecofficial	
	alpeshkh	headlinesindia	
	alphaefficiency	genuineonnet	
	alshiamey	mslgroupasia	
	alstonesays	anirudhbravichan	

Assumptions

Two Case Scenarios

How to Define “Interactivity”?

Scenario 1: Include all the nodes that has directional relationships

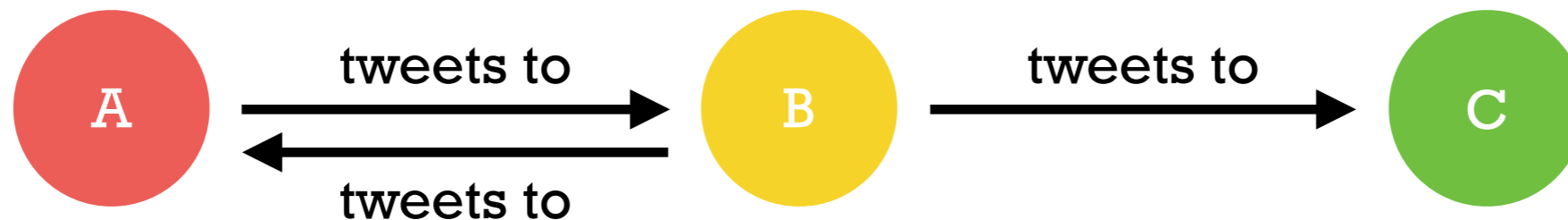


Vertex 1	Vertex 2
A	B
B	C

3 vertices, 2 edges

How to Define “Interactivity”?

Scenario 2: Include the nodes that have interactions with one another.



There is an interaction for both nodes A and B.

But there is **no** interaction for node C because C does not mention anyone to continue the network. Thus, C is not included in the vertices of the network.

Vertex 1	Vertex 2
A	B
B	A
B	C

3 vertices, 2 edges

Not Included!

Pros and Cons of the Scenarios

Scenario 1		Scenario 2	
Pros	Cons	Pros	Cons
<p>The graph becomes more extensive. We're including all twitter users who forms both interactive and one-directional relationships.</p>	<p>The number of vertices: 14012</p> <p>The number of unique edges: 16477</p> <p>Too many nodes, the graph becomes too cramped!</p>	<p>The number of edges reduce to 2167, which gives us a simpler and easily understandable graph.</p>	<p>We're removing the whole chunk of data on "how many people was this user X able to reach out to?" just because the mentioned users did not reciprocate.</p>

Moving Forward..

1. Coming up with a graph

We're using 2 programs to come up with a network graph:

1. NodeXL: an add-on for Excel

- Not extensive into quantitative metrics
- More suitable for small number of nodes

2. R: a statistical program

- More extensive analysis on the quantitative metrics
- Requires coding!

2. Defining the Influencers

Marketing Perspective

1. Reach: the ability to reach out to an audience
Popularity, proximity, goodwill
 2. Resonance: level of engagement with the audience
Frequency, period, amplitude
 3. Relevance: relevant content, relevant to the topic
Authority, trust, affinity
- * other factors like Klout score or Kled score...

2. Defining the Influencers

Analytics Perspective

Measures of Centrality: Higher centrality means, higher involvement in many relations, regardless of send/receive directionality (shows volume of activity)		
1. Degree Centrality	2. Betweenness Centrality	3. Closeness Centrality
Higher degree means higher number of contacts with other nodes	A central node occupies a “between” or intermediary position that connects many other nodes; can be the centre of information flow	Higher closeness shows that the node is close to many others can quickly interact and communicate with them without going through many intermediaries

3. Identifying the Influencers

We'll be identifying the top 10 influencers in the virality of *Kolaveri Di* video, based on the factors mentioned in the previous slides.