



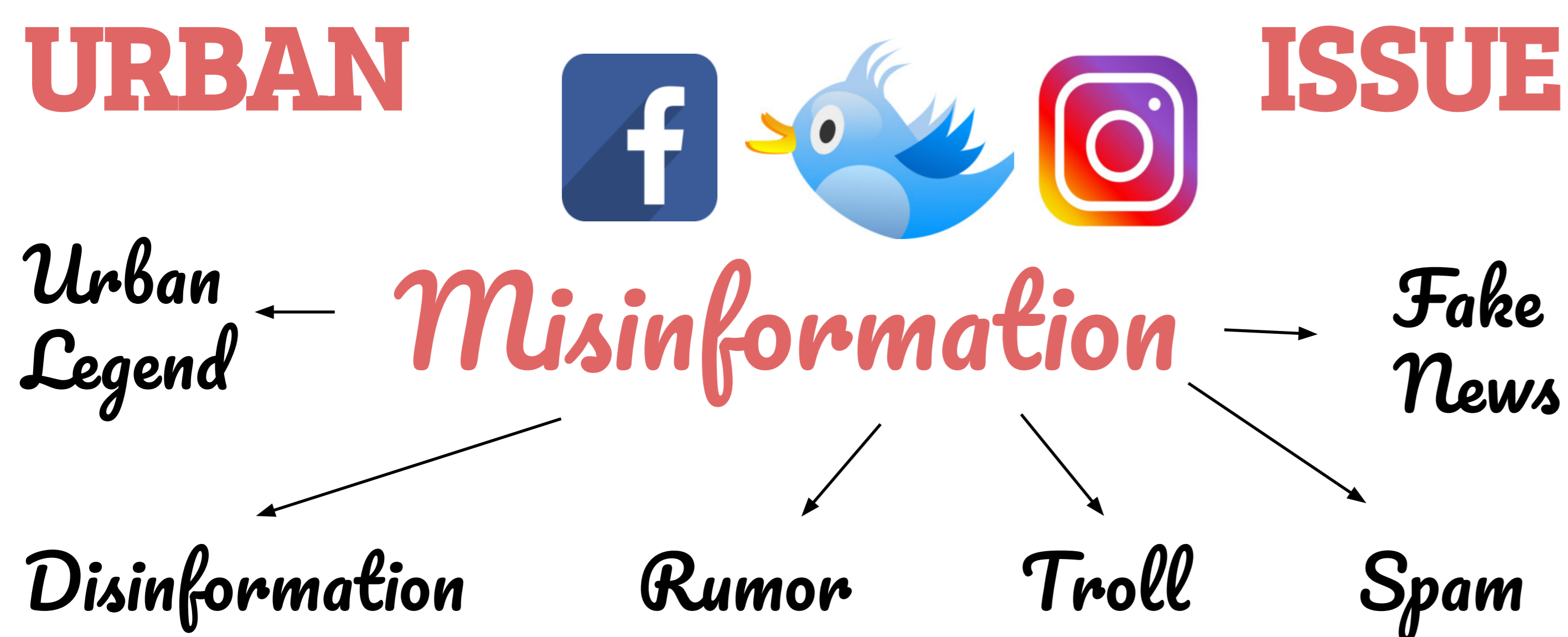
The Role of Social Capital in Information Diffusion over Twitter

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ABSTRACT

Social Capital is the resulting advantage of the individual's localization in a social structure. Our goal is to verify which users have high information capital, bridging and brokerage for providing and spreading information. To do so, we analyze their profiles on trending topics over Twitter. Our results show potential bots and fan accounts as the main information spreaders in Brazil, a very concerning result given the upcoming presidential election in October 2018.

1 - INTRODUCTION



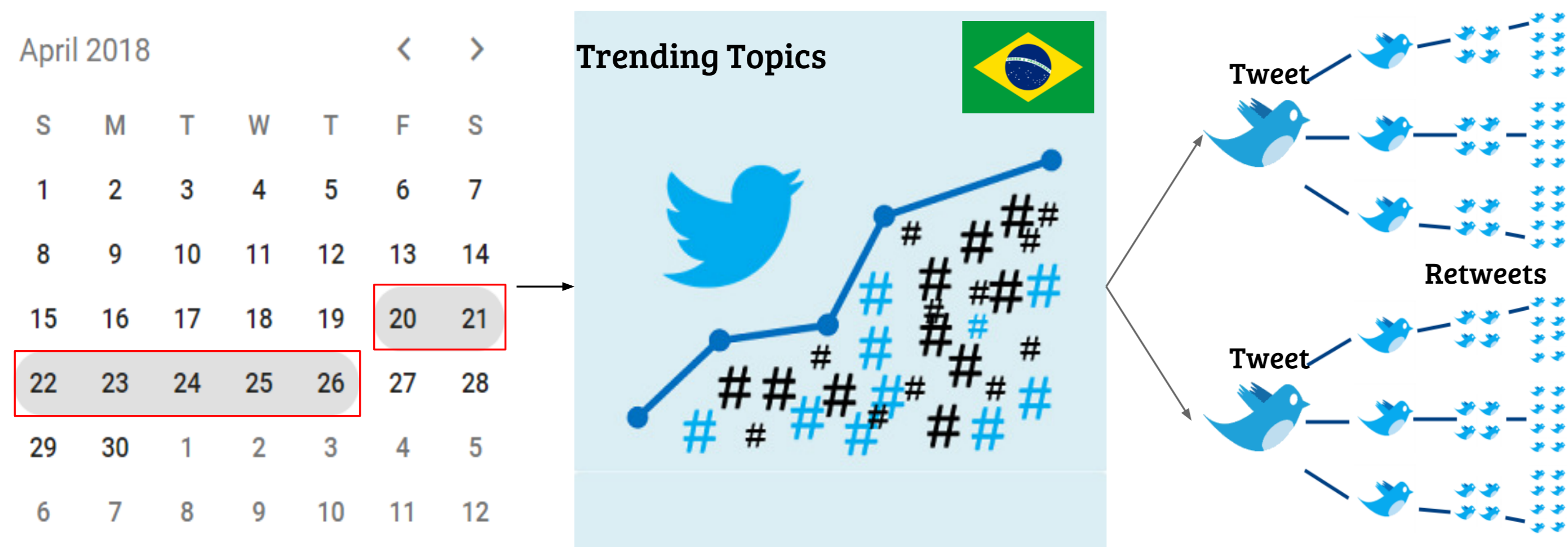
CONTRIBUTIONS: Evaluate Social Capital metrics on a comparative analysis of the top 10 Twitter users and assess the potential relevance of such users according to their behavior.

2 - RELATED WORK

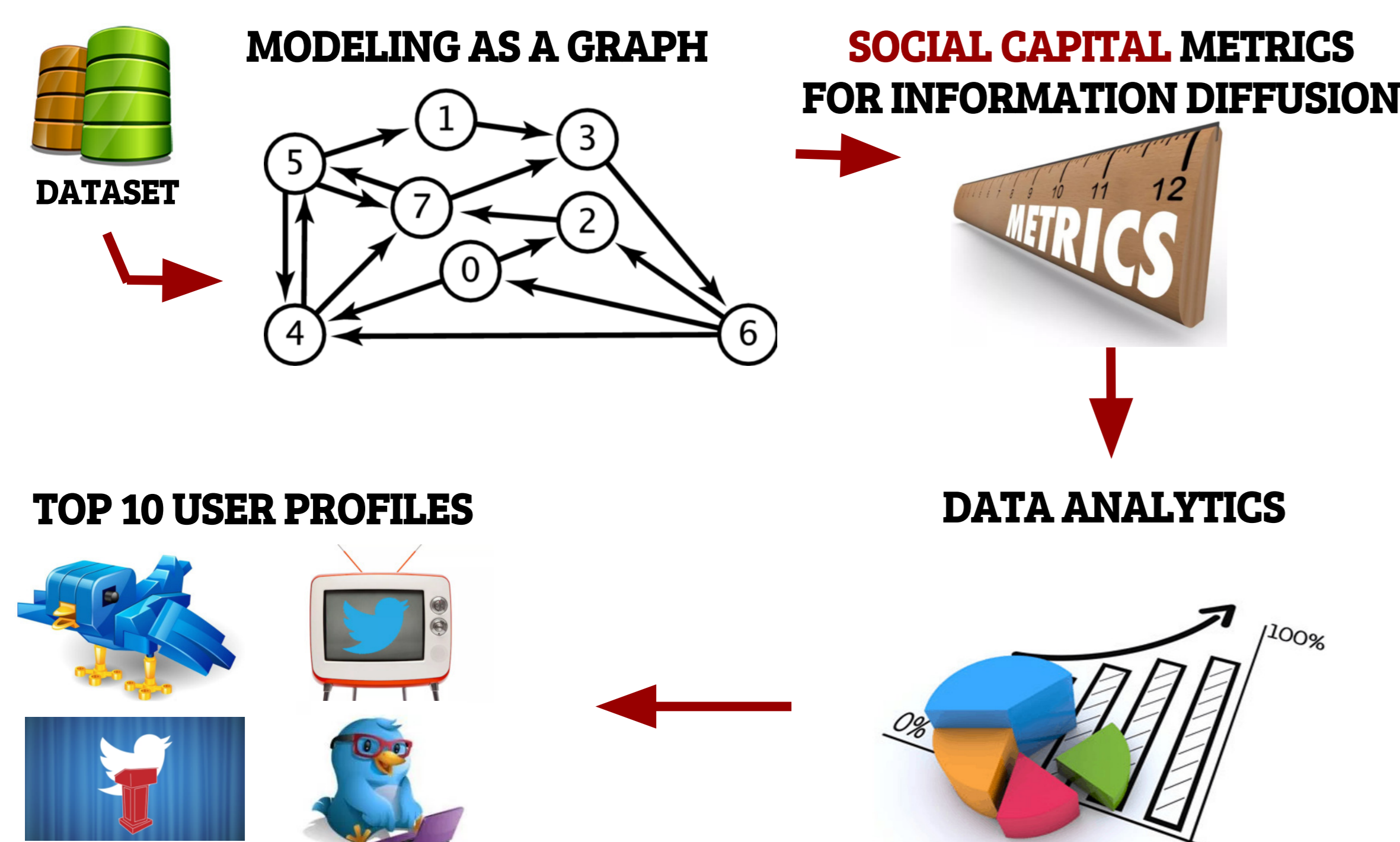
- Information Diffusion Process / Social Capital Facets
- Information Capital: Decay Centrality (DC) and Eigen Centrality (EC)
 - Brokerage Capital: Betweenness Centrality (BC)
 - Hubs and Authorities: HITS Algorithm
 - Bridging Capital: Neighborhood Overlap (NO)

3 - DATASET

After cleaning and data processing, the dataset contains 165,936 and 371,612 distinct users and messages, respectively.



4 - METHODOLOGY



5 - DATA ANALYSIS

Results: potential bots, typical users, and political fan accounts are the main spreaders, whereas primary media (sports news) and independent experts are the main providers.

Top 10 users – DC		
Rank	User	SC
1 ^o	@Flamengo	N
2 ^o	@FoxSportsBrasil	J
3 ^o	@bbb	N
4 ^o	@Esp_Interativo	N
5 ^o	@VascodaGama	N
6 ^o	@globoesportecom	N
7 ^o	@HugoGloss	F
8 ^o	@MomentsBrasil	F
9 ^o	@g1	J
10 ^o	@RedeGlobo	J

Top 10 users – EC		
Rank	User	SC
1 ^o	@ClaraGuimarae	7
2 ^o	@hey_dann	~
3 ^o	@pastorasandram5	
4 ^o	@JonahWhite30	
5 ^o	@_DiasFabio	
6 ^o	@AntroReality	~
7 ^o	@PedroAlvesFer12	
8 ^o	@jeanbuenodumke	7
9 ^o	@arte_prima	
10 ^o	@limalblue_ofc	

Top 10 users – BC		
Rank	User	SC
1 ^o	@RedeGlobo	J
2 ^o	@g1	J
3 ^o	@Esp_Interativo	N
4 ^o	@SBTonline	J
5 ^o	@HugoGloss	F
6 ^o	@gshow	J
7 ^o	@SporTV	N
8 ^o	@GloboNews	J
9 ^o	@MaisVoce_Globo	J
10 ^o	@gustavovillani	F

Top 10 users – Authorities		
Rank	User	SC
1 ^o	MarcosA22444338	~
2 ^o	@_DiasFabio	
3 ^o	@jhonatalima355	~
4 ^o	@PHRN1895	7
5 ^o	@_arthurpassos	7
6 ^o	@PedroAlvesFer12	
7 ^o	@Rgo17_	7
8 ^o	@FlavioM32255797	~
9 ^o	@RIPenha	
10 ^o	@AllanRN1981	~

Top 10 users – Hubs		
Rank	User	SC
1 ^o	@Flamengo	N
2 ^o	@FoxSportsBrasil	N
3 ^o	@Esp_Interativo	N
4 ^o	@globoesportecom	N
5 ^o	@VascodaGama	N
6 ^o	@bbb	J
7 ^o	@venecasagrande	F
8 ^o	@SporTV	N
9 ^o	@maurocezar	F
10 ^o	@lucaspedrosaEI	F

- LABELS**
- SC Social Category
 - providers
 - spreaders
 - primary media (sports news)
 - primary media (general)
 - independent expert
 - potential bot
 - fan account
 - typical user

Top 10 bridges (red edges) and their neighborhood - NO