Using Big Data and Network Centrality Metrics to Assist Regionally Aligned Forces in Identifying Influencers in their Operating Environment

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Abstract: Our research uses Network Centrality metrics applied to the Global Knowledge Graph (GKG) to provide military tactical commanders with a tool that identifies influential individuals at the national or sub-national level. GKG aggregates the people, organizations, locations, and themes of English news sources from across the world using an enhanced TABARI (Text Analysis by Augmented Replacement Instructions) algorithm. We use several programming languages to download, query, and analyze the GKG data daily. We then apply network centrality metrics to identify the most important people and organizations in a selected area of interest. The most influential names are merged with a two-sentence description from Wikipedia. These algorithms were configured into an open-source web application. This model and tool will allow tactical leaders of regionally aligned units to rapidly understand and engage influential persons in their operating environment.

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