# Development of an Algorithm for Detecting Sentiment-Driven Fake News in Arabic Social Media

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#### **Abstract**

In the contemporary digital landscape, the proliferation of fake news on social media platforms poses a pronounced concern, notably in the Arab realm where such platforms serve as principal information conduits. Amplifying this issue is the interplay between media and emotional mobilization, a prominent theme in European deliberative democracy, and a subject of increasing relevance globally. The salience of emotional content in media communication not only boosts engagement but potentially augments misinformation risks, underscoring the pivotal tension between passion and reason in public discourse.

Responding to this challenge, our research delineates the formulation of a specialized algorithm tailored to detect sentiment-centric fake news within Arabic social media content. Utilizing a vast corpus of Arabic news articles and social media narratives, the algorithm harnesses avant-garde natural language processing (NLP) and machine learning paradigms. These advanced methodologies empower the system to discern intricate patterns emblematic of misinformation and propaganda, particularly those that leverage emotional manipulation.

Central to our initiative is the provision of a robust analytical tool for diverse stakeholders, notably journalists, fact-checkers, and social media platforms. The overarching ambition is to fortify the defenses against the deluge of misinformation within Arabic-language media, ensuring accurate and emotion-resilient information dissemination. In summation, as media dynamics evolve, encompassing both rational and emotional dimensions, there remains a profound need for pioneering tools that navigate this complex interplay. This study represents a seminal endeavor in addressing misinformation's emotional facets, striving for an informed equilibrium in the digital communication sphere, especially as we tread into an era marked by AI-driven and synthetic media.

### Keywords

Arab News, Sentiment-driven Fake News, Social Media, Artificial Intelligence

## Bio

Ahmed El Gody, Associate Professor Media and Communication studies United Arab Emirates University. El Gody authored several academic articles and refereed chapters in areas of newsroom operation, media liberation and democratization process in the Middle East, social media, Arab spring and empowerment of societies and lately in using AI in news operation.

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