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COVID-19 RESEARCH NEWSLETTER

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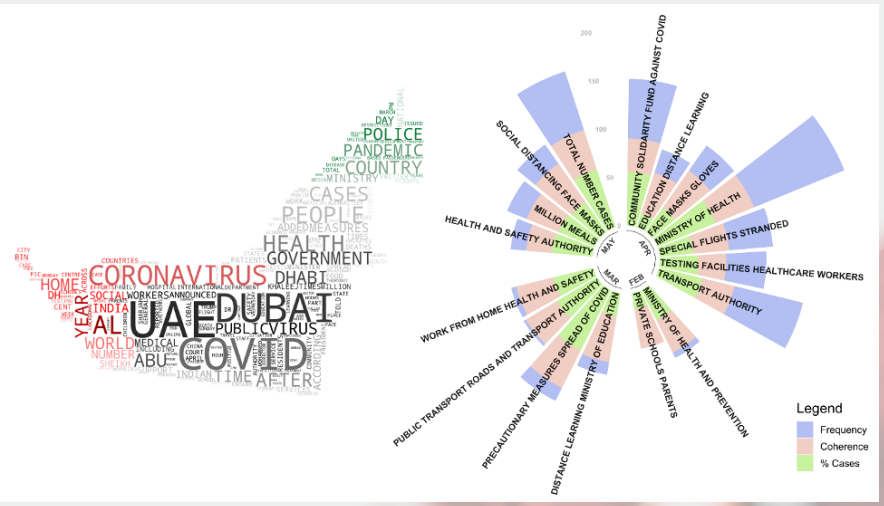
A Framework for Real-Time COVID-19 Media Classification, Sentiment and Opinion Mining, Information Extraction, and Trends Analysis



The COVID-19 pandemic has become a major concern worldwide and receives unprecedented media attention. Therefore, news content management, contextual search, sentiment and opinion mining, and trustworthy information filtering have become key to harvesting the real value of this massive amount of news. This growth of generated and published news about coronavirus in the form of text, audio, and video makes it hard for a variety of audiences ranging from ordinary people to decision-makers to navigate through, analyze, and select the most informative news about the pandemic, its evolution, vital precautions, and necessary interventions.

In this project, the research team propose a framework to analyze the massive amount of news in the UAE about COVID-19, including audio and video, using automatic speech recognition, deep learning, and natural language processing (NLP) approaches. Several challenges are addressed including the conversion of video and audio news into text, summarization, defining the relevant features to be extracted, modeling the information, and visualization of the results.

To evaluate the Media Classification, Information Extraction, and Trends Analysis modules of the framework, Khaleej Times COVID-19 news coverage, including 2566 media articles from 1st February to 15th May 2020, were used. The team also analyzed news trend per month to study the evolution of the main topics discussed over time. Results of monthly thematic clustering indicate high intra-cluster cohesiveness. News maturity levels have been reached in dealing with the pandemic, the coverage of various affected sectors, and the shift in news interests.

Visualization of COVID-19 news trend analysis can instantly allow policymakers, health authorities, and the public to understand the pandemic better as well as comprehend meaningful trends, content, and connections to deal with its spread, control, and interventions. The ongoing work focuses on unstructured data including real-time audio and video stream analysis as well as adaptation of content visualization.

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If you are interested in sharing your COVID-19 releated research, please send your contribution to research.office@uaeu.ac.ae

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