Info-symbiotic Social Media Analytics for Human Security

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Aim and Scope

We propose an info-symbiotic data analytics framework for human security that can be used as a decision support tool to analyse information dissemination through social media, predict the onset of escalating crisis situations, and prevent or mitigate both the onset and the impact.
The Analytics Framework

- **Warning Period**
  - **Alert Mechanism**

  This mechanism is aimed at spotting crucial outbreaks by detecting tipping points, when society is heading towards a point of no return.

- **Crisis Interpretation**
  - **Web Insights**
    The web insights process analyses the information of those web resources that have been added to reinforce the ideas embodied in a post.
  - **Radical Behaviour**
    This process spots instability scenarios based on the Human Security spectrum and extract, detect and interpret dissimilar behavioural patterns that outline radical behavioural traits for National Security.
  - **Ideology**
    The analysis of ideology provides valuable insights to identify two main elements: Authoritarianism and Hostility.
Real world examples

The robustness and effectiveness of our approach have been tested on different real-world events related to disruptive activity and health emergencies such as the COVID pandemic.

**ANALYSING TWO COVID-19 DISRUPTIVE EVENTS**

**MICHIGAN**
A convoy of thousands of motorists drove from all over the state to protest the governor’s stay-at-home order’s extension.

**TEXAS**
Rallies were organised to show disagreement against local restriction measures, where people demanded to reopen economies.
Real world examples

<table>
<thead>
<tr>
<th>Date (April 2020)</th>
<th>Disruptive Expression/Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Violate -&gt; Lockdown; Disagree -&gt; Curfew</td>
</tr>
<tr>
<td>17</td>
<td>Take -&gt; Streets; Protest -&gt; Michigan</td>
</tr>
<tr>
<td>18</td>
<td>Cancel -&gt; Lockdown; Protest -&gt; Lockdown</td>
</tr>
<tr>
<td>19</td>
<td>Break -&gt; Curfew; Want -&gt; Cure</td>
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</tbody>
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<th>Date (April 2020)</th>
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<tbody>
<tr>
<td>11</td>
<td>Lift -&gt; Quarantine; Reopen -&gt; Texas</td>
</tr>
<tr>
<td>17</td>
<td>Reopen -&gt; Government; Close -&gt; Schools</td>
</tr>
<tr>
<td>18</td>
<td>Wear -&gt; Facemask; Authorizing -&gt; Reopen</td>
</tr>
<tr>
<td>19</td>
<td>Open -&gt; Quarantine; Violate -&gt; Lockdown</td>
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Further Reading


Consortium

- **UK**
  - University of Birmingham

- **Greece**
  - University of Thessaly, Greece

- **International partner: China**
  - The Southern University of Science and Technology, Shenzhen, China.

We are open to collaboration with other institutes.
Thank You!