FakeCovid- A Multilingual Cross-domain Dataset for COVID-19

Gautam Kishore Shahi, Durgesh Nandini
University of Duisburg-Essen, Germany, University of Bamberg Germany

21st September 2020
Contents

● Introduction
● Our Contribution
● Datasets
● Class Normalization
● Dataset I & II
● Open Questions
● References
Introduction

- **Infodemic** makes difficult for users to find reliable sources for any claim made on the pandemic, either on the news or social media.

- **Lack of corpus to test methods for fake news detection on the pandemic.**

- More than 92 fact-checking websites in 40 languages are working around the globe.
Google Trend on Coronavirus and Fake News

Google Trend of Coronavirus

Google Trend of Fake News
Our Contribution

- **FakeCovid**: A very timely study on misinformation on the COVID-19 pandemic. Answering where COVID-19 misinformation originates from, and how it spreads.
- Explaining what makes COVID-19 misinformation distinct from other tweets on COVID-19.
- Merged 86 classes into 4 classes of fact checked articles.
Datasets

- We used two different datasets, one is the fact checked articles and another is sampled tweet from twitter.
  - **Dataset I** - 7623 news articles **Dataset II** - 1500 labelled tweets and 164805 random sampled tweet
- **Dataset I** - Took Poynter and Snopes as a reference data hub. Poynter has initiated International Fact-Checking Network (IFCN) to bring fact-checkers worldwide to a single platform. IFCN maintains a separate data hub for COVID-19. IFCN uses hashtags #CoronaVirusFacts, #DatosCoronaVirus.
- **Dataset II** - It was crawled using finding the link of the embedded tweets from the fact checked articles. Random sampled tweets collected using different hashtags like #covid19,#coronavirus.
# Class Used by IFCN

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly True</td>
<td>The primary elements of the rated statements are demonstrably true, however, there are minor errors, missing information or statements that need further clarification.</td>
<td><a href="http://www.snopes.com">www.snopes.com</a></td>
</tr>
<tr>
<td>Partially True</td>
<td>The rated statements are partially correct but leave out important details, includes major errors or takes aspects out of context.</td>
<td><a href="http://www.snopes.com">www.snopes.com</a></td>
</tr>
<tr>
<td>Mixture</td>
<td>The rated statements contain both significant true and significant false elements, such as exaggerations or false details. The available evidence behind the rated statements may also be evenly weighted in support of and against the claim.</td>
<td><a href="http://www.snopes.com">www.snopes.com</a></td>
</tr>
<tr>
<td>Partially False</td>
<td>The rated statements are mostly false or not backed by evidence, but there is more than one element of truth.</td>
<td><a href="http://www.animalpolitico.com">www.animalpolitico.com</a></td>
</tr>
<tr>
<td>Mostly False</td>
<td>The primary elements of the rated statements are demonstrably false, however, there are minor details that are accurate.</td>
<td><a href="http://www.politifact.com">www.politifact.com</a></td>
</tr>
</tbody>
</table>
Class Normalisation

We normalised verdicts by manually mapping them to a score of 1 to 4 (1=‘False’, 2=‘Partially False’, 3=‘True’, 4=‘Others’) based on the definitions provided by the fact-checking organisations. Our definition for the four categories are as follows:

- **False**: Claims of an article are untrue.
- **Partially False**: Claims of an article are a mixture of true and false information. The article contains partially true and partially false information, but it can not be considered as 100% true. It includes articles of type, partially false, partially true, mostly true, miscaptioned, misleading etc.
- **True**: This rating indicates that the primary elements of a claim are demonstrably true.
- **Other**: An article that cannot be categorised as true, false or partially false due to lack of evidence about its claims. This category includes articles in dispute and unproven articles.
Examples of Misinformation

I feel like this is the video that perfectly depicts how far we've come as civilized species. I present to you the Toilet Paper Rush of 2020, in #Costco stores.

Examples of Misinformation of false and partially false tweet

Occupants were unruly since morning & made unreasonable demand for food items. They behaved & abused staff at Quarantine Centre. Also they started spitting all over & on persons working/attending them incl doctors. They also started roaming around hostel building: CPRO Northern Railway

167 people of Tabligh Jamaat Nizamuddin reached Tughlakabad Quarantine Centre in 5 buses at 2140 hrs y'day. 97 people accommodated in Diesel Shed Training School Hostel Quarantine Centre. 70 were accommodated at RPF Barrack Quarantine Centre: CPRO Northern Railway Deepak Kumar

3:56 PM · Apr 1, 2020 · Twitter Web Client

10K Retweets 13.4K Likes
Dataset-I

- Crawled 7623 Fact check news article from 92 fact-checking websites in 40 languages, around 80% of articles are of false category.
- Dataset contains fact check articles from 105 countries, top 10 countries (India, USA, Spain) contributes 65% of the fake news.
Dataset-II

- Dataset II contains 1500 tweets which are classified as misinformation.
- These tweets are from 1187 unique accounts from Twitter.
- These tweets are classified into four different classes into False, Partially False, True, Others.
Dataset-I

Top 10 Fact Checking Websites
Dataset-I

Top 10 Language of Fact checked news articles and Top 10 countries (based on 1st version)

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>1083</td>
</tr>
<tr>
<td>United States</td>
<td>677</td>
</tr>
<tr>
<td>Spain</td>
<td>426</td>
</tr>
<tr>
<td>Brazil</td>
<td>283</td>
</tr>
<tr>
<td>France</td>
<td>229</td>
</tr>
<tr>
<td>Philippines</td>
<td>157</td>
</tr>
<tr>
<td>Columbia</td>
<td>151</td>
</tr>
<tr>
<td>Taiwan</td>
<td>132</td>
</tr>
<tr>
<td>Turkey</td>
<td>126</td>
</tr>
<tr>
<td>Italy</td>
<td>111</td>
</tr>
</tbody>
</table>
Dataset-II

Timeline of misinformation tweets created during January 2020 to mid-July 2020
Open Questions

● Classification of Fake tweets in random sampled tweet using the labelled misinformation tweets.

● Finding trends/similarity of fake news across different languages.

● Finding trends/similarity of fake news across different countries.

● Collaboration between Fact checkers, are they working on the same claims?
Thank you!!

More details is Available at

https://gautamshahi.github.io/FakeCovid/
References

- https://trends.google.com/trends/
- https://www.snopes.com/collections/