

## Detecting fake news and information

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Fake news has always been around. Under the guise of mis information, fake news has earlier operated in small circles, among known people and connected circles as incorrect information. What has now changed the gamut and influence of such news is technology. Technology like Facebook, Twitter, WhatsApp and other info sharing apps like Instagram have become the conduits through which such misinformation spreads and since there are more than millions of users on each of these social sites, the sphere within which misinformation may be circulated has also increased manifold. In India today, fake news is more than just misinformation.

As the BBC (2019) reported, “WhatsApp, India's most popular messaging platform, has become a vehicle for misinformation and propaganda ahead of the upcoming election. The Facebook-owned app has announced new measures to fight this, but experts say the scale of the problem is overwhelming.” Fake news in India has caused people to be lynched and influenced voting behavior. As The Atlantic reported, recently, “Misinformation is endangering India’s election (2019).” India has various fact checking organizations like BOOM, which partners with Facebook to check videos and posts, and Alt News. Just as technology today has enabled the flow of such news, it also has certain tools that can be used to combat the menace. But before we consider the technology, it is important to understand the different ways fake news disseminates online. CNN disinformation reporter Donie O’Sullivan (<https://www.youtube.com/watch?v=1vS5dXfBLmg>) says, “There is normally two main motivations. One is financial and two is political and ideological.” Writing for Medium (<https://medium.com/1st-draft/fake-news-its-complicated-d0f773766c79>), Dr. Wardle, says, to combat misinformation, we must understand the motives of those of who create it. Elliot Higgins, Founder of Bellingcat, says, “Poor Journalism, Parody, to Provoke or ‘Punk’, Passion, Partisanship, Profit, Political Influence or Power, and Propaganda” are the main motives of those who crate misinformation. Mis information is shared every time we share information without checking it. So deliberately created misinformation, gets shared when we retweet stuff without checking, between closely connected groups or close-knit sets of people where the information posted is trusted since its coming from a known source, the person who shares it.

As the Verification Handbook (<https://journalismcourses.org/courses/VRFY0419/verification.handbook.pdf>) says, “...journalists and humanitarian and emergency workers must become adept at using social media and other sources to gather, triangulate and verify the often conflicting information..” Dr. Claire Wardle agrees. A leading expert on social media, user generated content, and verification and co-founder and leader of First Draft (<https://firstdraftnews.org/>) the world’s foremost nonprofit focused on research and practice to address mis- and disinformation, she says when news is breaking journalists “different accounts, pages and groups on social networks.” In recently taught course (MOOC) in association with the Knight Center for journalism in the Americas, she outlined some strategies for detecting fake information. Key among them were using internet tools to verify facts and information.

### Using the internet and social media to verify facts

Often the only search engine most use is Google. But social media, especially Twitter can lead to a wealth of information. Dr. Wardle says that Boolean search queries on Twitter (just like search queries on Google) and the advanced Twitter search are helpful tools. What do you search for when you are fact checking? Twitter can handle complex search queries and hashtags can lead to sources and information that be used to verify. As Dr. Wardle advices, “Twitter lists which are really powerful.” Steph Nissen (<https://www.stephnissen.com/what-twitter-list/>) describes them as, “A list is a curated group of Twitter accounts. You can create your own lists or subscribe to lists created by others. Viewing a list timeline will show you a stream of Tweets from only the accounts on that list. The simplified version is that Twitter lists organize your Twitter followers.” On Google, typing in the words, site:twitter.com/\*/lists, and then putting in keywords will throw up Tweetdecks that be followed. Michael A. Caulfield, author of the Web Literacy for Student Fact-checkers (<https://webliteracy.pressbooks.com/>) says, most web content is usually not original and thus look for previous versions of the content. He has a list of sites (<https://webliteracy.pressbooks.com/chapter/fact-checking-sites/>) where content can be checked for veracity. Another tool to monitor social media and the internet is CrowdTangle (<https://www.crowdtangle.com/features>). This is a licensed tool available to newsrooms to track “individual pieces of content, you can also see what's trending on Google Search.” With CrowdTangle you can also search comments and shared news on Facebook. Journalists create a dashboard to monitor social media and the internet, focused on different news they are covering, and check information as the stories come in.

**Dealing with scrapes:** Scrapes are images and videos that are downloaded, modified and re-uploaded online. Being skeptical of the information you have found is always a very useful place to begin with. Such products can be verified by reverse image searches enabled by websites like TinEye (<https://www.tineye.com/>). TinEye helps find “duplicate and modified copies of an image in your image collection. Perfect for identifying duplicate images, image verification, and

deploying reverse image search solutions.” The Google Reverse Image Search works on similar principles. As the <https://www.labnol.org/internet/mobile-reverse-image-search/29014/> says, “Google Reverse Image Search helps you quickly discover visually similar images from around the web. Upload a photograph from your desktop to Google Images and it will show you related images used on other websites and also different sizes of the same photo almost instantly. Journalists can use the reverse search option to find the original source of an image or to know the approximate date when a picture was first published on the Internet. Photographers can use ‘search by image’ feature to know about other websites that are using their photographs.”

**How date and time stamps work on social posts:** Finding the date and stamp on social media posts helps identify where the post originated from. For example, as Raymond Wong says, on Mashable, “Instagram app now shows the exact date (month, date and year) a post was published on both our own and other peoples' posts.” By checking the date and time on the post, images can be checked for the original time they were posted and whether they have been scrapped and reposted. Geo locating photos often shows the time and location of where the original photo was taken. For example, the site <http://osxdaily.com/2015/05/08/view-exact-location-photo-taken-preview-mac/> shows how the Preview function leads to the info tab and GPS section where the location and date of the original file can be checked. Geo location can be very important. In an incident, ISIS supporters across Europe were encouraged to take photographs with the ISIS social media campaign’s hashtag on a piece of paper but as the FirstDraft reported, users inadvertently gave away their positions (<https://firstdraftnews.org/how-twitter-users-tracked-down-4-isis-fanboys-from-a-pr-campaign-gone-wrong/>), allowing Twitter users to track down the exact location where each photograph was taken and inform the local police. Verifying tweets can also be done through websites like Who Tweeted It First (<http://ctrlq.org/first/>) and <http://verificationjunkie.com/>.

**Identifying photos and videos:** Other tools that can help determine when the photo or video was taken include the Wolfram Alpha (<https://www.wolframalpha.com/about/>) which is a knowledge engine that brings in available information from across the web. As a tool, one of its main strengths is that it allows fact checkers to look for the weather at the time and day the time stamp on photos or videos show. This can then be used to check if the background of the photo or video matches the weather as shown on the day and date by Wolfram Alpha. As the BellingCat says, “The first thing to look for is landmarks that might help narrow down the search.” FindExif (<http://www.verexif.com/en/>) helps extract exif data from any jpg online photo. Simple and easy to use, all it needs is a simple url to work with. There is no need to upload the photo. The GeoSearch tool (<http://youtube.github.io/geo-search-tool/search.html>) needs an address or location with a time frame to find videos uploaded from different areas. It is a tool designed for fact-checking locations and crowdsourcing.

**Advanced google maps can also help.** For example, photos can be checked against the street view imagery available. Another useful tool, another which allows you to look up who might own a domain name, how long the name has been registered and the location of the owner is <https://viewdns.info/>. Besides Google maps, Tencent Maps (formerly SOSO Maps), a desktop and web mapping service application and technology provided by Chinese company Tencent, offers satellite imagery, street maps, street view ([coverage](#)) and historical view perspectives, as well as functions such as a route planner for traveling by foot, car, or with public transportation. Android and iOS versions are available.

Algorithms too are now being refined for use to help journalists’ fact check reports. Naeemul Hassan of UT Arlington and Bill Adair of Duke University in their paper, present a tool called ,ClaimBuster (<https://idir.uta.edu/claimbuster/>) have automated fact checking. In a recent white paper (<https://www.blog.google/around-the-globe/google-europe/fighting-disinformation-across-our-products/>) Google said that it was working very hard to ensure that audiences had access to safe and correct information. The company was doing this by adding more “context” for searches to help audiences check for themselves the background of the results, including links to related information, as well as different ways of notifying users that certain results have been fact-checked by reliable organizations (<https://support.google.com/websearch/answer/7315336?hl=en>).

The Journalists ToolBox ([https://www.journaliststoolbox.org/2019/04/12/urban\\_legendsfact-checking/](https://www.journaliststoolbox.org/2019/04/12/urban_legendsfact-checking/)) has different ways journalists can use Google Search, YouTube, Google Chrome, Google Earth and Google Translate to check for facts. The Google chrome can become “a verification dashboard that helps you investigate, debunk or confirm the authenticity of a photograph or video” with added extensions that help check the veracity of information. Other Verification plugins like [invid-project.eu](http://invid-project.eu) are designed to help journalists verify images and videos. The <http://reveal-mklab.iti.gr/reveal/index.html> can help to detect still images alterations. Videos can be verified by Amnesty International: YouTube DataViewer <https://citizenevidence.amnestyusa.org/> and all it needs is a video’s thumbnails to do a reverse image search in one click. The Media Cloud is an open-source platform for media analysis (<https://mediacloud.org/>) that can create an instant analysis of how digital news media covers different topics. Newsworthy (<https://www.newsworthy.se/en/>) is a system developed in Sweden, that monitors open government data and data analyses them to find leads by identifying outliers and trends.

Information especially during a crisis, can be easily manipulated. Here the Google Crisis Response Map (<https://newsinitiative.withgoogle.com/training/lesson/5402052981161984?tool=Google%20Crisis%20Map>) can be useful. The google team works directly with authoritative emergency organizations such as the Red Cross, NOAA and many others

to create and update the Google Crisis Map, which features helpful information regarding disasters all over the world. A **Field Guide to “Fake News” and Other Information Disorders** (<http://fakenews.publicdatalab.org/index.html>) has other digital resources to help reporters check information for facts.

**Resources that are useful include:**

<https://www.bellingcat.com/resources/how-tos/2014/07/09/a-beginners-guide-to-geolocation/>  
<https://firstdraftnews.org/stunt-geolocation%E2%80%8A-%E2%80%8Averifying-the-unverifiable/>  
<http://verificationhandbook.com/>  
<https://firstdraftnews.org/en/education/curriculum-resources/>

**About the author**



Dr. Paromita Pain is an assistant professor of Global Media at the University of Nevada, Reno, USA. Her research focuses on alternate media and global journalism practices from feminist perspectives. A former journalist with The Hindu Newspaper, India’s most respected broadsheet, she has also written for The Guardian and Al Jazeera. Interested in epistemological concerns raised by emerging forms of media that are hybrids between old and new forms, between citizen and professional news practices, she has published various book chapters on the intersection of gender and social media besides looking into areas of online commenting and uncivil behavior and its impact on journalistic practices. She uses qualitative and quantitative methods and has recently started focusing on computational methods of data collection and analysis. Her research has been published in refereed journals like the Journalism and Mass Communication Educator, Journalism Studies, Journalism Practice, Media Asia and Feminist Media Theory. As an Assistant Professor of global media studies, at The Reynolds School of Journalism, University of Nevada, Reno, her particular focus at the moment is digital feminist activism in the global south.

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**Explained: What is Fake News?**

Lots of things you read online especially in your social media feeds may appear to be true, often is not. Fake news is news, stories or hoaxes created to deliberately misinform or deceive readers. Usually, these stories are created to either influence people’s views, push a political agenda or cause confusion and can often be a profitable business for online publishers. Fake news stories can deceive people by looking like trusted websites or using similar names and web addresses to reputable news organisations.

<https://www.webwise.ie/teachers/what-is-fake-news/>

**How to Spot Real and Fake News**

Alice rushes to work with her cell phone in one hand and a coffee in the other. Scrolling through her social media feed, she’s stopped in her tracks by the news that her company is about to be bought out by its biggest rival.

She quickly posts a response, shares the story with her contacts, and emails it to her team so that they can discuss it later.

But then Alice has a troubling thought. What if the story wasn't true? What if she just shared a "fake news" story? After all, she didn't check the source, and it was from a website she'd never heard of before.

If she has been a victim of fake news, and then added to the rumor mill herself, how will people ever trust her again?

Fortunately, there's lots you can do to avoid making the same mistake as Alice. In this article, we explore how you can separate fake news from the truth.

<https://www.mindtools.com/pages/article/fake-news.htm>

**Fake news website**

Fake news websites (also referred to as hoax news websites) are Internet websites that deliberately publish fake news—hoaxes, propaganda, and disinformation purporting to be real news—often using social media to drive web traffic and amplify their effect. Unlike news satire, fake news websites deliberately seek to be perceived as legitimate and taken at face value, often for financial or political gain. Such sites have promoted political falsehoods in Germany, Indonesia and the Philippines, Sweden, Myanmar, and the United States. Many sites originate in, or are promoted by, Russia, North Macedonia, Romania, and some individuals in the United States.

[https://en.wikipedia.org/wiki/Fake\\_news\\_website](https://en.wikipedia.org/wiki/Fake_news_website)