Q. 1: What’s a problem you’ve noticed that someone might be encountering in the world?

I know I’m not the only one that has noticed this – the Internet is loaded with fake news all over the place, and no place spreads it faster than social media. Social media uses complex algorithms to show users content that their browsing habits indicate they would click/share. This allows false stories to reach millions of people, with the intention of pushing a false narrative to disingenuously sway public opinion. People voting when they don’t have the facts is bad. People voting when they don’t have the facts but *think* they do is worse.

Q. 2: What evidence do you have about this problem—did you read it in the news, see it on the street, or read it in the research? What are the details of the problem (e.g., how often does it happen? To whom? Why?)? Cite sources for your evidence.

We’ve all read about it in the news and experienced it firsthand. I see it when I make the mistake of going on Facebook, my parents (especially my father) consume it. You’ll see a friend’s parent post some wacky link on Facebook and you just think “how the hell…” then you realize that 20 people liked it and you begin to understand the magnitude of it. It happens every day, to people of all ages, in all countries. It is a global problem that is negatively affecting western-style democracies as well as countries with other forms of government. Bad actors are able to use fake news to mislead the public and to de-legitimize the press, which is meant to keep governments in check. When the press is weakened, all opposition is weakened, and authoritarian governments are enabled. Turkey and Russia are two present-day examples of places where this occurred.

The reason fake news works as well as it does is 1) it is an effective means of manipulating the masses and 2) profitable. I believe that the second reason is essentially caused by the first reason. There is money in it because it is effective. As long as people can benefit financially from creating and delivering fake news it will continue to be a problem.

Sources: [Fake News: Lies spread faster on social media than truth does (NBC)](https://www.nbcnews.com/health/health-news/fake-news-lies-spread-faster-social-media-truth-does-n854896), [Researchers say fake news had 'substantial impact' on 2016 election (The Hill)](http://thehill.com/policy/cybersecurity/381449-researchers-say-fake-news-had-substantial-impact-on-2016-election), [How do fake news sites make money? (BBC)](https://www.bbc.com/news/av/business-38919403/how-do-fake-news-sites-make-money), [How fake news is creating profits (AdPerfect)](http://www.adperfect.com/how-fake-news-is-creating-profits/)

Q. 3: Tell a brief story of what happens when someone encounters this problem in real life/real time.

Facebook knows your browsing habits. They show you a political headline that they think you’ll click. It links to a story with a powerful image and a message that resonates with your belief. You share it with your social network, hoping other people can see what you did and get the feeling you felt. Only there’s one problem. The image is 4 years old and from something unrelated. The story is made up, and any reported statistics are just as fake.

You just shared fake news, and before someone could tell you it’s fake, 5 people already viewed it. Some of them shared it to their social network. The lie spreads everywhere before the truth catches up to those that are willing to listen to it.

Q. 4: How might a software system or application affect/solve the problem? That is, when, where, and how does the software system enter the problem storyline (Q. 3)?

For this software system to work, it would need to be widely adopted by the two major social media platforms where content is shared: Facebook and Twitter. The product would require an elaborate algorithm that would anonymously track thousands of social media accounts, comment sections, and other sources that are associated with fake news. Similar to [Hamilton 68](https://dashboard.securingdemocracy.org/), it would analyze these for trends, common phrases, linked articles, etc. What websites are being linked to? What hashtags and word combinations are being clicked and shared? What region are these posts originating from? What time of day are they peaking at? Are they using a proxy server?

By keeping track of data such as this, we can create a model for what looks like fake news and what doesn’t. By combining several sources into one algorithm, we can provide a more complete picture than Facebook and Twitter currently provide. They flag news that other users have reported to be fake, but that is not as effective as real-time flagging, considering how fast the lies can spread.

A user’s news feed would look the same, but shared posts that are found to be fake will be visibly flagged to the user. There will be a warning that shows some details about source of the fake news without revealing identifying information, so that the source can continue to be monitored. Users that share content that is found to be fake will be notified and flagged as well. Facebook and Twitter will need to have some sort of policy to address accounts that knowingly or repeatedly share fake news.

Q. 5: What are the features of the system that make it so effective or useful? (For example, how does this system make a task or activity more efficient or easier?)

Instead of relying on users to flag news as fake, it will be analyzed and flagged using artificial intelligence. This way we can be one step ahead of the fake news providers, and we can get past the issue of the social media echo chamber, where false stories do not get flagged for several reasons. Currently, if I share a fake story on Facebook and everyone that sees it has similar opinions to mine, it could easily pass as real, since no one in my network would recognize it as fake, or at least call me out for it. Using artificial intelligence can help alleviate this problem.

Q. 6: Name at least three things a user should be able to do with the system you’re proposing? (For example, for a particular application the user should be able to (1) filter bad websites, (2) in fewer than 30 seconds, and (3) highlight accurate information about a particular topic.)

1) Users should be able to get a clear picture of what trends/words/phrases are prevalent in fake news at that time, 2) Newly-posted content should be analyzed in real-time so that our system will know if it is fake as soon as it is posted, 3) At some point, Facebook and Twitter ought to financially penalize verified users that are flagged for repeated violations of the fake news policy. By taking away the financial incentive, or adding a financial liability to the equation, the root of the problem is easier to address.

Q. 7. Describe what would happen if the software system/application were implemented and worked—how would the world and user be changed for the better?

The effectiveness of fake news on extremely successful social networks would decrease significantly if the fire could be put out before it’s started. This product would make it easier and faster to flag fake news before it gets spread as if it were truth. Users would be more aware of the information they’re seeing and sharing, and purveyors of fake news would be punished. The world is more peaceful when its leaders are not authoritarians that lie to their own people. Stopping their manipulation of public opinion through social media is a good step.