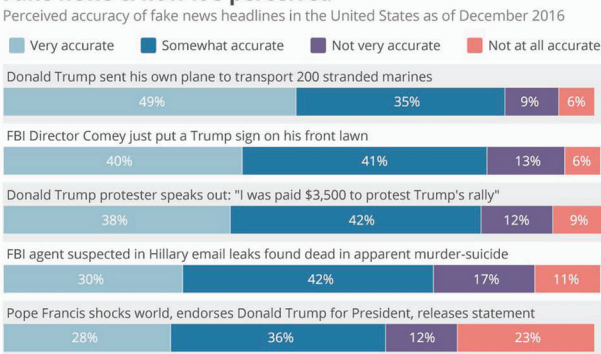


# The Issue

- Fake news is a phenomenon in which objectively false information is deliberately spread with the intent of fooling people into believing something that isn't real
- A study published in late 2019 found that people "correctly assessed only 44%" of headlines (Moravec et al, 2019)<sup>1</sup>
- Fake news has clearly had a massive impact on the United States specifically, since large portions of political discourse since 2015 have been affected by fake news in some way
- "Confirmation bias is present, with participants more likely to be credible when they aligned with the user's political beliefs" (Moravec et al, 2019)<sup>1</sup>
- Fake news is not spread to convince people to further support a certain side; it is to instead mobilize those people to convert those who are unsure of which side they belong to

## Fake news & how it's perceived



$$0.3(author) + 0.2(publisher) + 0.3(sources) + 0.1(recently updated) + 0.1(funding source)$$

# Using a data-driven algorithm to access website credibility and inform the public of fake news

Benjamin Kahn, Thomas Trinh, Cameron Irving, Edmund Vu

<https://kahnbenamina.github.io/GCI-Website/>

Home Check a site!  
Python Flask App

## Website Accuracy Checker

[Click here to enter a website!](#)

### Who are we?

We are Benjamin Kahn, Cameron Irving, Edmund Vu, and Tommy Trinh. Just some Chapman University Comp Sci students.

### What is our project?

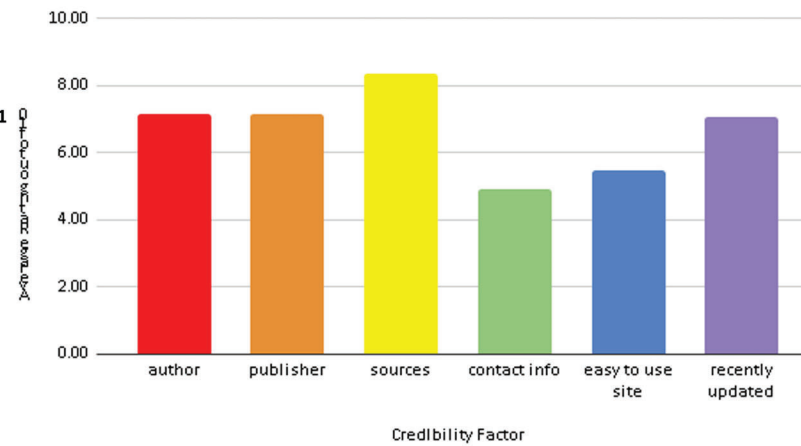
We are creating a website to rate websites, articles, authors, and more on their credibility.

### Why are we doing this?

There is a lot of fake news out there today and we want people to be able to know if what they are reading online is accurate or not.

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## Credibility Factors Rated By Students Based on Perceived Necessity



# The Data

- "Our results show... source reputation ratings influenced... believability of articles, with low ratings having more than twice the effect of formatting. When... sources were unknown, a low rating reduced... belief." (Kim and Dennis, 2019)<sup>2</sup>
- With this in mind, we decided to attempt to give articles a credibility reputation rating
- We polled 50+ GCI students to see what they considered the most important factors of credibility
- This was done to determine what an average person would most likely use to determine article credibility

# The What

- We had to determine how to best reach people who wanted to discover the credibility of a specific article, leading to the website choice
- Better yet, a website that would allow users to test their own articles based on an algorithm that would always be up-to-date
- We used the data we got from our survey to create a basic algorithm that would attempt to account for each of the credibility factors
- Each factor of a certain website will have a constantly-updated credibility score that will be plugged into the algorithm
- In "sources with low ratings, expert ratings and user article ratings had a stronger impact on believability than user source ratings" (Kim et al, 2019)<sup>3</sup>

# The Website

- Gives a score (/10) for a given article
- Auto-updates scores for each article by updating each value score in algorithm
- Shows the scores of previous articles

# The Conclusions

- Credibility is mostly subjective
- Humans are psychologically wired to trust fake news without the help of systems such as ours
- Whether it is our program or another, something needs to be done to curb the spread of fake news
- Creating a website is easy unless you need to host it online

# The Resources

1. Moravec, P. L., Mihal, R. K., & Dennis, A. R. (2019). Fake News on Social Media: People Believe What They Want to Believe When It Makes No Sense at All. MIS Quarterly, 43(4), 1343-1360. <https://doi.org/10.25300/MISQ/2019/15595>  
2. Kim, A., & Dennis, A. R. (2019). Says Who? The Effects of Presentation Format and Source Rating on Fake News in Social Media. MIS Quarterly, 43(3), 1025-1039. <https://doi.org/10.25300/MISQ/2019/15188>  
3. Kim, A., Moravec, P. L., & Dennis, A. R. (2019). Combating Fake News on Social Media with Source Ratings: The Effects of User and Expert Reputation Ratings. Journal of Management Information Systems, 36(3), 931-968. <https://doi.org/10.1080/07421222.2019.1628921>

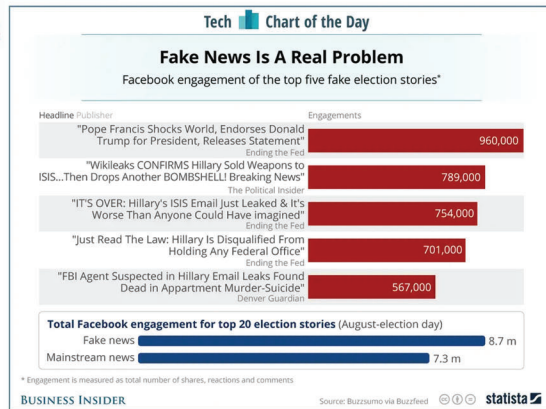
# The Process

- After looking at the list of Grand Challenges and assessing our strengths, we decided that we wanted to do use technology to protect people
- In the first semester, we attempted to protect the privacy of voters by creating safer voting machines that were also more portable
- We then decided that with a lack of encryption skills, doing something with code would be easier and more fruitful, leading to fake news

# The Why

- We decided to tackle fake news because it's a fundamental problem that we actually potentially have the ability to solve
- We could code a resource for people to use to determine article accuracy

FIPP



```
<!DOCTYPE html>
<html lang="en">
<link
  rel="stylesheet"
  href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
  integrity="sha384-ggOyR0iXCb66p6DRbAAD0beGUqNp/TrpvOH2JgPJ88i/7YMD4ZO4ZeWV9"
  crossorigin="anonymous"
/>
</body>
<div class="container">
  <div class="header">
    <nav>
      <ul class="nav nav-pills pull-right">
        <li role="presentation" class="active">
          <a href="index.html">Home &nbsp;&nbsp;&nbsp;</a>
        </li>
        <li role="presentation">
          <a href="insertLink.html">Check a site! &nbsp;&nbsp;&nbsp;</a>
        </li>
      </ul>
    </nav>
    <h3 class="text-muted">Check a website!</h3>
  </div>
  <form>
    Enter a website:
    <input id="url" type="text" name="UserLink" size="100" />
  </form>
  <div id="site-data-container" style="margin-top: 100px;"></div>
</div>
<script>
  document
    .getElementById("url")
    .addEventListener("keypress", function (event) {
      event.preventDefault();
      if (event.keyCode == 13) {
        fetch("https://127.0.0.1:5000/sendlink", {
          method: "post",
          body: JSON.stringify({ url: event.target.value }),
          headers: {
            "Content-Type": "application/json",
          },
        })
          .then((response) => response.json())
          .then((info) => {
            document.getElementById("site-data-container").innerText = info;
          });
      }
    });
</script>
</body>
</html>
```