Comparative view of LLMs on an article

1.GPT-4o:

Fake news has had a serious impact on different areas of society, including the economy, politics, and public health. For example, during the 2016 U.S. presidential election, 529 unreliable statements were shared on Twitter (Jin et al., 2017). Additionally, 25% of news sources linked in tweets were either fake or highly biased in favor of Trump or Clinton, potentially influencing the election (Bovet and Makse, 2019).More recently, during the COVID-19 pandemic in 2020, false information spread rapidly, such as the misleading claim that COVID-19 vaccines could cause infertility (Schraer, 2021).

Fake news has become a major issue, affecting both society and social media platforms.To tackle this problem, researchers have developed methods to detect fake news. These methods aim to classify whether information found in news articles and social media posts is false. Several datasets, such as FakeNewsNet (Shu et al., 2020), Twitter16 (Ma et al., 2017), and CoAID (Cui and Lee, 2020), have been created to support these efforts. However, most studies only focus on checking whether news is factually correct. But is that enough to fully understand the effects of fake news?

To improve our understanding, we believe it's important to look at fake news from multiple angles, including:

1. Whether the news is true or false
2. The intention of the person spreading it
3. Who the fake news is targeting
4. How the target is being reported
5. The purpose behind spreading it
6. The potential harm it can cause to society
7. The types of harm it can create

By analyzing fake news in this way, we can better understand how it spreads and why some people knowingly share false information. This detailed approach can also help create more effective tools for journalists, fact-checkers, policymakers, and governments to combat fake news.

As part of our research, we have developed the first Japanese fake news dataset using this new method. This dataset will help us study how fake news spreads in Japan. In the future, we plan to apply this approach to fake news in other languages and compare results across different countries.

Our study makes three key contributions:

- We identify problems in existing fake news datasets.
- We introduce a new method to analyze fake news from different perspectives, not just its factual accuracy.
- We create the first Japanese fake news dataset using this method.

2.Gemini-2.0 Flash:

Fake news is a big problem that hurts many parts of society, like the economy, politics, and even our health. For example, during the 2016 US presidential election, a lot of untrue things (529 different ones!) were shared on Twitter. Also, about one in four news sources linked in tweets that were either fake or strongly biased towards one candidate might have affected who people voted for. More recently, during the COVID-19 pandemic in 2020, a flood of information led to the spread of wrong and harmful content, like the false idea that the COVID-19 vaccine causes infertility.

Fake news has become a serious crisis that puts our society and the online world at risk. In the past, researchers have tried to fight this by doing things like creating systems to spot fake news and building collections of fake news examples (called datasets). These efforts mostly focused on whether the news was true or false.

But can we really understand "fake news" and all the bad things it causes just by knowing if it's true or not? This is what we started thinking about. We believe that to truly understand fake news, we need to look at more than just the facts. We also need to consider things like:

- Why did the person spreading the fake news do it?
- Who is the fake news trying to harm?
- How is the fake news trying to influence people?

So, we came up with a new way to label fake news. We looked at what "fake news" means and the fake news examples that already exist. For each piece of news and the posts about it on social media, we labeled them based on these things:

1. **Factuality:** Is it true or false?
2. **Intention of the spreader:** Did they know it was false when they shared it?
3. **Target:** Who is the fake news aimed at?
4. **Method to report the target:** How does the fake news talk about or attack the target?
5. **Purpose:** What is the goal of the fake news?
6. **Potential harm to society:** How could this fake news hurt society?
7. **Types of harm:** What specific kinds of damage could it cause?

By looking at fake news from these different angles, we can get a much better understanding of this complex issue. For example, it's interesting to see how fake news spreads differently depending on whether the person sharing it knows it's false or not. These labels can also be very helpful in the real world. They can help build better fake news detection systems that can show journalists, fact-checkers, policymakers, and governments how dangerous false information can be.

Then, we created the first collection of Japanese fake news using our new labeling system. This will help us understand how fake news spreads in Japan. In the future, we plan to use this same method on fake news examples in English and other languages. By comparing the results from different countries, we hope to learn even more about fake news.

Here's what our study achieved:

- We found problems with how fake news collections have been created in the past by looking closely at existing ones.
- We created a new way to label news that looks at different aspects of it, not just whether it's true or false.
- We built the first Japanese collection of fake news using our new labeling system.

3.LLaMA 2 (Meta):

Fake news has become a serious problem that affects many areas of society, including the economy, politics, and public health. For example, during the 2016 US presidential election, many false statements were spread on Twitter. Similarly, during the COVID-19 pandemic, misinformation about the vaccine and infertility was spread rapidly.

To combat this issue, researchers have proposed various tasks, including detecting fake news. Several datasets have been created to support this task, such as FakeNewsNet and Twitter16. However, these datasets focus mainly on whether the news is true or false.

We believe that to fully understand fake news, we need to consider more aspects, such as:

1. Why someone spreads false news
2. Who is targeted by the false news
3. How the false news is presented
4. What harm it can cause to society
5. What type of harm it can cause

We propose a new way of annotating (labeling) fake news to capture these different aspects. We applied this method to create the first Japanese fake news dataset.

This study contributes to:

1. Identifying issues with existing fake news datasets
2. Proposing a new annotation scheme to capture various aspects of fake news
3. Creating the first Japanese fake news dataset

By applying this method to other languages and countries, we hope to gain a deeper understanding of fake news and its impact on society.

4.Falcon3 7B Instruct(Falcon (TII):

Fake news has caused harm across different areas like economy, politics, and health. For instance, during the 2016 U.S. presidential election, many false statements were spread, affecting the outcome. In the recent COVID-19 pandemic, lies about vaccines harmed public trust. These misleading stories threaten a healthy society and social media. Many studies tried to fight fake news by checking if the content is true or false. Researchers created datasets to test these methods. However, all these studies usually only looked at if the news is true. This paper suggests going beyond just factual accuracy. We also need to consider the intention behind spreading misinformation, who it targets, how it is reported, and its potential negative impact on society. For example, understanding whether those spreading fake news know the information is false can change our approach. The paper introduces a new way to categorize fake news into seven aspects, aiming to give a more complete picture. This leads to the creation of the first Japanese fake news dataset based on these categories. This method is planned to be used in English and other languages for broader analysis. The paper contributes by identifying problems in existing fake news datasets, proposing a new way to categorize fake news, and creating a new Japanese dataset. Simplified Explanation: Fake news has harm in areas like politics and health. Researchers developed ways to spot fake news stories, but they often just check whether the news is right or wrong. This paper suggests looking at more than just facts. It also thinks about why someone might share a false story, who they might target, and how it affects people. The paper shows how to do this for fake news in Japanese and plans to use this method for other languages too. This helps us understand fake news more deeply.

5.Deepseek:

Fake news has caused a lot of harm in many areas of society, including the economy, politics, and health. For instance, during the 2016 U.S. presidential election, 529 false or misleading statements were shared on Twitter. About 25% of the news sources linked in these tweets were either fake or heavily biased in favor of Trump or Clinton, which may have influenced the election results. More recently, during the COVID-19 pandemic in 2020, false information spread quickly, such as claims that the COVID-19 vaccine could cause infertility. Fake news has become a serious problem that threatens society and the social media environment.

To address this issue, researchers have developed ways to detect fake news. For example, some studies focus on identifying whether news articles or social media posts contain false information. Many datasets have been created to help with this task, such as FakeNewsNet, Twitter16, and CoAID. However, most of these datasets only focus on whether the news is true or false. This raises an important question: Can we fully understand fake news and its impact on society just by knowing if it's true or false? This is the main motivation behind our work.

We believe that to truly understand fake news, we need to look at it from multiple angles, not just whether it's true or false. For example, we should also consider the intentions of the people spreading the fake news, the harm it could cause to society, and who or what the news is targeting.

To do this, we propose a new way of analyzing fake news that includes the following points:

(1) whether the news is true or false,
(2) the intentions of the person spreading it,
(3) who or what the news is targeting,
(4) how the target is being portrayed,
(5) the purpose of the news,
(6) the potential harm it could cause to society,
(7) the type of harm it might cause.

By looking at fake news from these different perspectives, we can better understand how it spreads and its impact on society. For example, it's interesting to see how the spread of fake news changes depending on whether the person sharing it knows it's false or not. This kind of analysis can also be useful for real-world applications, such as helping journalists, fact-checkers, and policymakers identify and address the dangers of fake news.

We used this new approach to create the first Japanese fake news dataset. This dataset will help us understand how fake news spreads in Japan. In the future, we plan to apply this method to fake news datasets in other languages, such as English. By comparing fake news in different countries, we hope to gain a deeper understanding of this complex issue.

In summary, this study makes three main contributions:

1. We identified problems with existing fake news datasets and suggested ways to improve them.
2. We proposed a new way to analyze fake news that looks at it from multiple perspectives, not just whether it's true or false.
3. We created the first Japanese fake news dataset using this new approach.

6. Self view:

Over the years,fake news has caused severe damage to the society such as in field of economy,politics,health problems and more.For instance,during 2016 U.S. Presidential election,529 false statements were spread via twitter.Moreover around 25% of media outlets which were assumed to be linked to the tweets were either fake or highly biased in favour of Trump or Clinton,potentially influencing the election.During the COVID-19 pandemic which occurred around 2019,there was a wide spread of misinformation regarding various health issues.

Fake news has become a serious threat to the society and the social media ecosystem.Several studies have proposed various methods to tackle the spread of fake news and curb down social problems caused by them.For this purpose many fake datasets have been constructed to facilitate this task. For example:FakeNewsNet,Twitter16,CoAID.

These existing studies focuses exclusively on factual aspects of the news:

- Motive behind spreading the fake news
- Various events that took place due to spread of fake news based on given datasets
- Target of the news
- Harmfulness of news to the society

We propose a new way of analyzing fake news.We looked at what "fake news" means and the fake news examples that already exist. For each piece of news and the posts about it on social media, we labeled them on the following points:

(1) factuality
(2) intention of the spreader
(3) target
(4) method to report the target
(5) purpose
(6) potential harm to society
(7) types of harm

Looking at fake news from these different perspectives, we can better understand how it spreads and its impact on society. For example, it's interesting to see how the spread of fake news changes depending on whether the person sharing it knows it's false or not. This kind of analysis can also be useful for real-world applications, such as helping journalists, fact-checkers, and policymakers identify and address the dangers of fake news.

Based on this approach we construct a Japanese fake news dataset.This dataset will help in better understanding of fake news in Japan.We are planning to apply this method to fake news datasets in other languages in future.By applying this approach in multiple countries and comparing the results with provide more detailed analysis of fake news.

This study makes following contribution:

- We identify problems that need to be resolved in dataset construction by comprehensive survey of existing fake news dataset.
- We follow and approach to look at news from different perspectives,instead of considering only one condition/situation.
- We construct the first Japanese fake news dataset based on the new approach.

Comparison of the answers provided by different LLMs and self view

1.GPT-4o	2.Gemini-2.0	3.LLaMA 2 (Meta)	4.Falcon3 7B Instruct(Falcon (TII)	5.Deepseek	6.Self View
Strength: Provides a detailed, structured explanation. Includes citations and references to prior studies. Clearly explains why a new fake news annotation scheme is needed. **Weakness:** Some sentences are dense and information-heavy, making it slightly difficult for casual readers.	**Strength:** Simplifies the content while maintaining key information. Uses engaging and conversational language, making it more accessible. Breaks down complex ideas into easily understanable points. Introduces questions to engage the reader. Well-structured explanation of how fake news should be labeled. **Weakness:** Less formal compared to GPT-4o. Some details are oversimplified, losing the depth of analysis. Doesn't include citations or references.	**Strength:** Concise and to the point. Maintains logical flow in explaining fake news. Provides a clear structure similar to GPT-4o but in a shorter format. Explains why a new annotation scheme is needed. **Weakness:** Lacks depth compared to GPT-4o. Less engaging than Gemini. Doesn't elaborate much on real-world applications	**Strength:** Straightforward & easy-to-read explanation. Covers main ideas efficiently without being too wordy. Captures key points about fake news and its impact. **Weakness**: Lacks details & depth—doesn't explain much beyond the basics. No citations or real-world applications discussed. Feels too generalized at times.	**Strength:** Well-structured and informative without being over complex. More detailed than Falcon, offering a better breakdown of fake news. Covers multiple perspectives on fake news, such as intent, harm, and purpose, making it more comprehensive. **Weakness:** Lacks citations and external references, unlike GPT-4o. Does not introduce many new ideas beyond what other LLMs have already explained. Less engaging compared to Gemini 2.0, which uses a conversational tone.	**Strength:** Summarizes multiple perspectives clearly, creating a well-rounded explanation. Keeps the language formal and structured, making it appropriate for research. Identifies key issues with existing fake news datasets and proposes solutions. Well-organized points on fake news analysis, covering factuality, intent, harm. Captures the core message effectively without unnecessary complexity. **Weakness:** Does not include citations or references, unlike GPT-4o. A bit formal and neutral, which makes it less engaging than Gemini 2.0.

My Own View is stronger because it combines key insights from different perspectives into one refined explanation.