Milestone 3: Determining Reliable Sources (CRAAP Test)

Team Number: 29
Team Members: Will Legg

Evaluate each one of your articles using the following criteria:

Source 1 (Primary Source):
Haridasan, A., Thomas, J., & Raj, E. D. (2023). Deep learning system for paddy plant disease detection and classification. *Environmental Monitoring & Assessment, 195*(1), 1. https://doi.org/10.1007/s10661-022-10656-x

Currency:

When was the information published and/or last updated?	15 May 2022

Relevance (Why [did you] choose these sources of information?)

Explain the relation between the information source and the topic of your investigation. In what ways does it relate to your questions?	This paper ties together my major (Computer Science) with the field of plant biology to investigate how computer systems and machine learning can be utilized to detect diseases in plants.
What are the limitations of the information in relation to its usefulness to your investigation?	The text is focused primarily on data handling and computer processes rather than plants but it does go in depth into plant diseases and social climates surrounding plants and agriculture.
Are the links to other sites within the article functional?	**Yes**
Do the citations and references increase or decrease the credibility of the article? Explain why.	There are many sources relating to all topics which I think are academic and seem credible.

About the publication/publisher

Where is the information published?	Environmental Monitoring & Assessment
What type of publisher are they? (university, for profit, non-profit etc.)	Scientific Journal
What are their interests? (financial, personal etc.)	Technical developments and data from environmental monitoring and assessment.
Does the URL reveal anything about the author or source? (.com (commercial), .edu (educational), .gov (U.S. government), .org (nonprofit organization), or .net (network)	I accessed the article through EBSCO through MSU library although it looks like the journal is under license to Springer Link which is hosted on a .com cite telling me it has commercial interests.
What are the publisher sponsorships?	
Is it an open-access source or is it limited by licensing/payment?	Limited viewing through DOI/EBSCO

About the author(s)

What is the author(s) background and credentials.	All published academics, primarily in data science but also engineering and medicine
Explain why their credentials and background give the author(s) the authority to discuss the topic?	They are actively doing research in relevant fields.
Look up the author in Google. What do others say about them?	Nothing negative
What are the authors sponsorships?	AI for Earth Microsoft Azure Compute Grant.

Purpose

Who do you think is the intended audience for this information? (public, scholars, students, etc.)	Probably other folks in the scientific field who are interested in conducting similar research.
What is the purpose of the information? (persuade, inform, click bait, distract etc.)	Share research findings
Does the language or tone seem biased and free of emotion?	**Yes**
Are there advertisements or other types of content attached to the site where the article is published? If so, what purpose do they serve?	**No**

Accuracy

What types of evidence is the author using to support their claims/arguments?	Statistics about disease identification and methods they've taken to create models to better identify plant diseases.
How is the evidence presented?	Formally, data, graphs, charts, pictures and words.
Has the information been reviewed or refereed?	The paper had to be accepted by the journal.
Do the works cited allow you to verify the information.	**Yes**

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- **Based on your analysis clearly explain (at least 3) potential biases related to the information sources. [*Merriam-Webster*, bias is defined as "prejudice in favor of or against one thing, person, or group compared with another."]**
  The article seems to focus on the application of machine learning and data science techniques in agriculture, specifically for rice crop disease detection. The information may be biased towards portraying these technologies in a positive light, potentially overlooking challenges or limitations. There might be a tendency to highlight successful outcomes while downplaying issues that could arise in real-world implementations. The article appears to convey a positive outlook on the use of advanced technologies, such as machine learning, deep learning, and GPUs, in the field of plant pathology. This enthusiasm might lead to a lack of critical examination of potential drawbacks, ethical considerations, or the practicality of implementing such technologies on a broader scale. A more balanced discussion of both advantages and challenges may be necessary. The article extensively discusses the use of Azure virtual machines and Azure Machine Learning Studio for implementing the described system. This could introduce a bias towards Microsoft Azure as the preferred platform, potentially neglecting alternative cloud computing solutions. The article might benefit from a more comprehensive comparison of various cloud platforms and their suitability for similar applications.

- **Based on your analysis, is the article trustworthy and credible? Explain your decision.**
  I believe this article is generally trustworthy although it presents potential bias through its funding from Microsoft Azure. The Journal Environmental Monitoring & Assessment from Springer Nature is peer-reviewed and well respected in the academic community.

Source 2 (Secondary Source):

Tumanov, K. (2023). The New Era of Food and Agriculture. *Newsweek Global, 180*(17), 44. https://d.newsweek.com/en/file/466253/country-report-agriculture-june-2023.pdf

Currency:

When was the information published and/or last updated?	June 2023

Relevance (Why [did you] choose these sources of information?)

Explain the relation between the information source and the topic of your investigation. In what ways does it relate to your questions?	The article discusses the challenges and opportunities in the agriculture and food industry, emphasizing the need to produce more food sustainably to meet the increasing global demand while addressing environmental concerns.
What are the limitations of the information in relation to its usefulness to your investigation?	The article provides insights from various industry leaders and experts, but the depth of analysis on certain topics might be limited. A more in-depth exploration of specific issues, supported by data, could enhance the article's overall reliability
Are the links to other sites within the article functional?	**Yes**
Do the citations and references increase or decrease the credibility of the article? Explain why.	The article lacks explicit citations and references

About the publication/publisher

Where is the information published?	Newsweek
What type of publisher are they? (university, for profit, non-profit etc.)	They are for profit, news magazine
What are their interests? (financial, personal etc.)	politics, world affairs, science, technology, business, culture
Does the URL reveal anything about the author or source? (.com (commercial), .edu (educational), .gov (U.S. government), .org (nonprofit organization), or .net (network)	It is a .com platform, showing an commercial interest.
What are the publisher sponsorships?	Currently independent
Is it an open-access source or is it limited by licensing/payment?	Subscription based

About the author(s)

What is the author(s) background and credentials.	International Business Journalist

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Explain why their credentials and background give the author(s) the authority to discuss the topic?	Author has an academic background in business and economics and has published multiple works before
Look up the author in Google. What do others say about them?	No notably bad reviews.
What are the authors sponsorships?	Works through Investment Reports

Purpose

Who do you think is the intended audience for this information? (public, scholars, students, etc.)	General Public
What is the purpose of the information? (persuade, inform, click bait, distract etc.)	Information
Does the language or tone seem biased and free of emotion?	Tone is generally neutral
Are there advertisements or other types of content attached to the site where the article is published? If so, what purpose do they serve?	Yes, ads seem targeted towards farmers and such. Come from Bayer, Jiffy, BioWish and Verti Farm

Accuracy

What types of evidence is the author using to support their claims/arguments?	Interviews with prominent folks in the industry.
How is the evidence presented?	In article format with some small inforgraphics/graphs
Has the information been reviewed or refereed?	**Edited by Lewis Hart**
Do the works cited allow you to verify the information.	**No**

- **Based on your analysis clearly explain (at least 3) potential biases related to the information sources. [*Merriam-Webster*, bias is defined as "prejudice in favor of or against one thing, person, or group compared with another."]**
  The article appears to include insights from various industry leaders, ranging from agriculture professionals to CEOs of companies. Depending on the selection of these voices, there might be a bias towards perspectives that align with the interests of the agricultural industry. For example, if the article predominantly features viewpoints from large corporations, it might not fully represent the diverse range of opinions within the sector. The text emphasizes technological advancements and innovations in agriculture, such as AI, robotics, and regenerative practices. While these developments are noteworthy, there could be a bias toward presenting a highly optimistic view of technology as the solution to challenges. This may downplay potential risks or ethical considerations associated with the widespread adoption of certain technologies. The article places significant emphasis on the environmental challenges faced by the agriculture sector, such as greenhouse gas emissions and the impact on freshwater resources. While this is a crucial aspect, there might be a bias towards portraying environmental issues as the primary concern, potentially overshadowing other important aspects like social and economic dimensions of agriculture.

- **Based on your analysis, is the article trustworthy and credible? Explain your decision.**
  The biases presented above hurt the credibility of the work but the information and views of the industry leaders could still be a useful source in the right context.