Project Notes:

Project Title: Impact of retracted journal articles: online COVID-19 misinformation

Name: Andy Hu

Note Well: There are NO SHORT-cuts to reading journal articles and taking notes from them. Comprehension is paramount. You will most likely need to read it several times so set aside enough time in your schedule.

Contents:

Knowledge Gaps:

This list provides a brief overview of the major knowledge gaps for this project, how they were resolved and where to find the information.

Knowledge Gap	Resolved By	Information is located	Date resolved
Are there enough total retracted articles for data to be collected?	Going through databases of journals and looking for retracted articles	Not located in a specific place, but a good number of articles were found. Will eventually compile a list of retracted articles.	Sep 30
How will online citation information be collected?	Looking at a couple of citation trackers like Altmetric or Mendeley. Also looked at papers that have used these citation trackers to see their methods	On project proposal, altmetric seems like a good option to use	Oct 30th
How to determine context of information	Identified one possible method so far. May be able to use something called sentiment analysis. More research/testing needs to be done	Articles 11 and 12 talk a bit about sentiment analysis and it seems that it may be viable, though it does have quirks that may have to be worked out	Nov 10th
How does sentiment analysis work?	Assigns a positive-negative scale score for the body of text based on a training algorithm similar to machine learning.	Watching some TED talks on it as well as reading a patent on it	Nov 25th
How to collect data to feed into sentiment analysis program?	(Not done, will look into text-mining)		

How to get the difference in citations prior and post retraction?	Unsure, may not be possible.		

Literature Search Parameters:

These searches were performed between (Start 9/3/2020) and XX/XX/2019.
List of keywords and databases used during this project.

Database/search engine	Keywords	Summary of search
ScienceDirect	music	Only looked at one article very briefly
Nature	Artificial Intelligence	Only looked at one article about general artificial intelligence
ScienceDirect	analyzing retracted articles	Found several articles to look over that may help with my potential project
Google Patents	social media scientific articles	Looked at variety of patents within this field
Google scholar	Social media retracted articles	This one paper (Misinformation and Its Correction: Continued Influence and Successful Debiasing) stuck out to me and seemed most relevant
Science Direct	Misinformation social media	One papers looked at and found. Looks very relevant to my project as it deals with looking at some retracted scientific articles and tracking their influence on social media
Google patents	Sentiment measure	Looked at social analytics patent to try and understand how sentiment measures work
Science Direct	Social media sentiment analysis	Did not find any articles that have done something very similar to what I am doing. However, many studies have used sentiment analysis for

		various other things. Looking into methodology in particular will be useful.
Google, Science Direct	Transgender retracted	Searching for viability of looking at the influence of retracted articles dealing with transgendder issues. Overall, not enough?
Science Direct, Pubmed, Google Scholar	Anti-vaccination retracted misinformation social media	Looking at viability of studying anti-vaccination retracted scientific journal articles. Overall, this has been studied pretty thoroughly already. Good example though of impact.
Science Direct	Covid-19 retracted	Found that COVID-19 was probably good topic for my project as there seems to be larger rates of retractions compared to general body of science
Google	Hydroxychloroquine misinformation	Was searching for if there were any specific retracted studies that I could use in my Literature review as an example of the impacts of retracted scientific journal articles on COVID-19 discourse on social media.
Science Direct	Covid-19 misinformation	Found one article that goes over how it may be important to address the misinformation surrounding COVID-19
Google	Social media Rise	Found article #20 which contains useful figures that I used in my literature review.

Article # Notes: Title

Article notes should be on separate sheets

KEEP THIS BLANK AND USE AS A TEMPLATE

Source Title	
Source citation (APA Format)	
Original URL	
Source type	
Keywords	
Summary of key points (include methodology)	
Research Question/Problem/ Need	
Important Figures	
Notes	
Cited references to follow up on	
Follow up Questions	

Article #1 Notes: Music chord inversion shape identification with LSTM-RNN

Article notes should be on separate sheets

Source Title	Music chord inversion shape identification with LSTM-RNN
Source citation (APA Format)	Mukherjee, H., Dhar, A., Ghosh, M., Obaidullah, S. M., Santosh, K., Phadikar, S., & Roy, K. (2020). Music chord inversion shape identification with LSTM-RNN. *Procedia Computer Science, 167*, 607-615. doi:10.1016/j.procs.2020.03.327
Original URL	https://www.sciencedirect.com/science/article/pii/S1877050920307936
Source type	article
Keywords	Music
Summary of key points (include methodology)	Computer algorithms such as neural networks can be used to identify musical chord inversions. Music production has been changing slowly over time and with the advent of new technologies, computers are becoming more and more involved in the process. Records are relatively easy to produce nowadays allowing performers easy access to background tracks and giving students of music the ability to analyze compositions more deeply. One of the important parts of musical compositions is the background music(BGM). A significant part of the BGM is chords. Chords two or more notes played together at the same time. For a defined chord, there are a variety of different ways of playing it which are known as inversions. Identifying the correct inversions of a chord is crucial to being able to preserve the feeling of a composition. Chords played for shorter amounts of time as often happens in the real world are more challenging the shorter the chord. Using long-short-term-memory recurrent-neural-networks(LSTM-RNN) 40572 clips have been analyzed to an accuracy of 99.47%.
Research Question/Problem/ Need	How can computer algorithms can be used to identify chord inversions accurately
Important Figures	
Notes	Shorter clips can be analyzed with good accuracy

Cited references to follow up on	
Follow up Questions	What are LSF-deltaS deltaG features What is feature dimension What are nut and bar chords What are cross validation folds What is a confusion matrix What is MFCC

Article #2 Notes: Why general artificial intelligence will not be realized

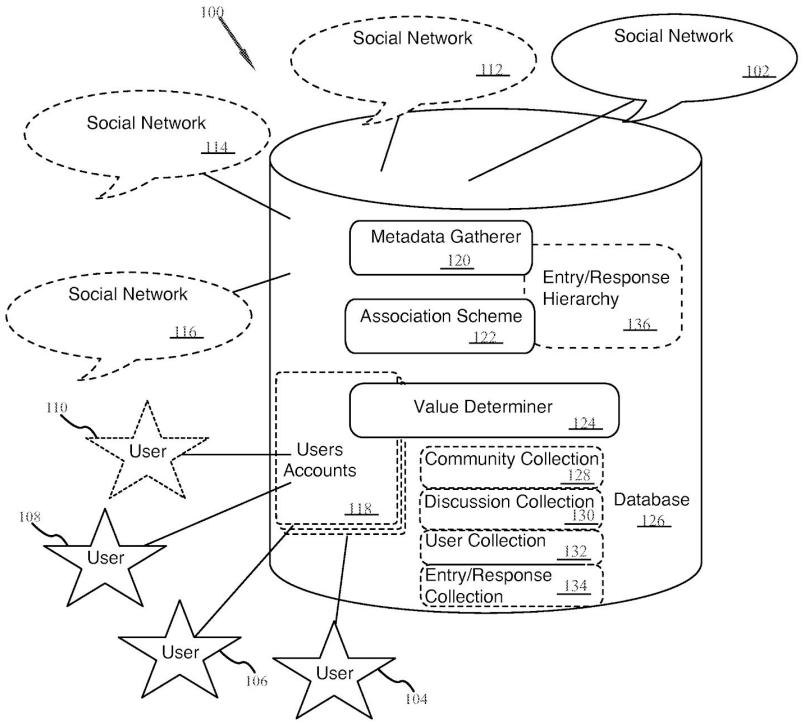
Article notes should be on separate sheets

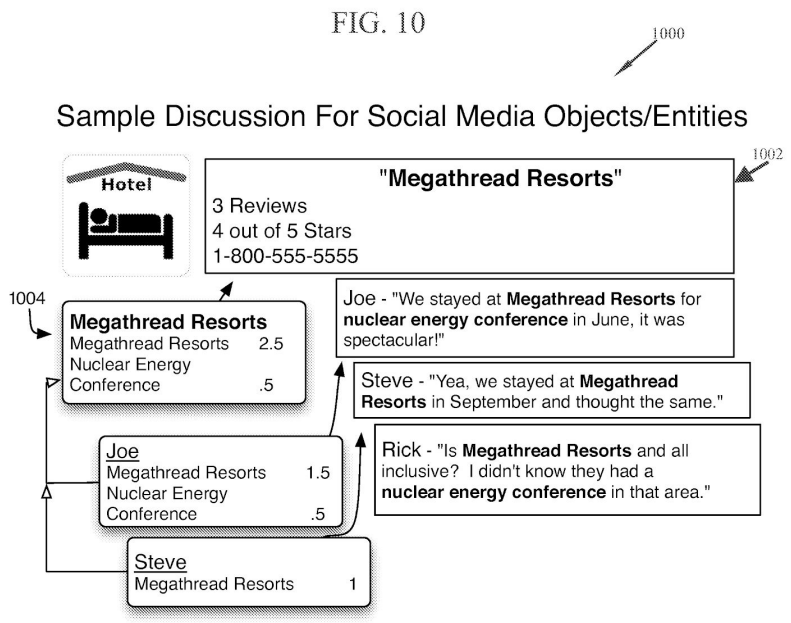
Source Title	Why general artificial intelligence will not be realized
Source citation (APA Format)	CitationFjelland, R. (2020). Why general artificial intelligence will not be realized. Humanities and Social Sciences Communications , 7(1), 10. https://www.nature.com/articles/s41599-020-0494-4
Original URL	https://www.nature.com/articles/s41599-020-0494-4
Source type	Journal Article
Keywords	Artificial intelligence
Summary of key points (include methodology)	People have been trying to develop a general artificial intelligence similar to human intelligence since the creation of the first modern-day computers during WW1. However, this is impossible because computers lack the ability to garner the tacit knowledge that enables humans their general intelligence.
Research Question/Problem/ Need	Why can't general artificial ever be created?
Important Figures	
Notes	Artificial general intelligence will not be realized even with the recent developments in deep learning and big data. People who spend their time trying to do so are chasing an impossible dream. The main reason for this is because computers are not in this world. This is proved in part because computers lack tacit knowledge, even in the case of neural networks which are restricted to the world of science. They also fail to pass the Turing test for the same reason. Lacking this tacit knowledge is important as tacit knowledge is what allows humans to understand things through context. Some recent attempts by people operating under the assumption that an AGI is plausible have been to create an AI capable of diagnosing patients as a human doctor would. This was encouraged by the success of previous AI's such as Watson, which won a Jeopardy game;

	Deepblue, which beat the world chess champion; and AlphaGo, which beat the world Go champion. Only in the case of Go is where arguments can be made for tacit knowledge being used by a computer, as Go is just that complex. However, AlphaGo is not truly using tacit knowledge as the data that the AI is trained upon is human-selected. Making AI out to be able to do more than it can is a bad idea, as fundamentally, an AGI is impossible.
Cited references to follow up on	
Follow up Questions	Is artificial intelligence really this unrealistic?

Article #3 Notes: System and method for determining similarities between online entities

Source Title	System and method for determining similarities between online entities
Source citation (APA Format)	Assam, B. A. (2015). *System and method for determining similarities between online entities* (US20150310059A1). IFI CLAIMS Patent Services. https://patents.google.com/patent/US20150310059A1/en?q=social+media+scientific+articles&oq=social+media+scientific+articles
Original URL	https://patents.google.com/patent/US20150310059A1/en?q=social+media+scientific+articles&oq=social+media+scientific+articles
Source type	Patent
Keywords	social media scientific articles
Summary of key points (include methodology)	Provides a possible way of analyzing entries on social medias to determine similarities of one user to another user Provides an interesting ranking method of the importance of comments Does this by: - Collecting some fields/areas from social medias - Needs at least post by a first user - Defines values to be associated with fields - Evaluates similarity between first and second users

	- Overall aggregated value is then calculated
Research Question/Problem/ Need	How to determine similarities between online entities.
Important Figures	



Notes	"While feedback and rating systems provide various means for ranking or recommending social media objects such as songs, videos, products, restaurants, accommodations, and so forth, these raking systems are open to bias feedback and fraudulent results" "The challenge lies in understanding such an expression as "Hot Dog." Does this mean the food, a canine with an elevated blood pressure or an expression of amazement?" " search engines permit a search wherein a first term is used within X words or characters of a second term."(May also be helpful when searching for other research articles to read) "the open-architecture of the Web requires a better standard for providing the right information to the right people at the right time." "The lack of an authentic social standard has resulted in misinformation, intrusive/inaccurate advertising, threats to privacy, and malicious behavior by unwanted, trolling individuals over open forums and discussions." "systematic standard for establishing online credentials in order to recognize the similarities between the various parts that define the Social Web"(Is this right?) IMPORTANT DEFINITIONS TO UNDERSTAND THESE RUN-ON SENTENCES "Social Network" as used herein is also understood and appreciated to be any online community platform where Users are identified by some form of User ID and make some level of exchange between themselves through

	Entry/Response." "'Entity'—An Entity is recognized and defined by any social media object that can be associated with Fields and their Values that are generated through Users Entry/Responses in online Discussions." "'User'—He or she who is providing the data in an Entry/Response." Probably want to define terms at beginning rather than in the middle of paper for reading comprehension unlike this paper "As such, a User wishing to identify Entities with useful information can be quickly identified with greater context then is generally permitted with a more free form web search."
Cited references to follow up on	US8458584B1(Extraction and analysis of user-generated content)
Follow up Questions	

Article #4 Notes: Social media fact checking method and system

Source Title	Social media fact checking method and system
Source citation (APA Format)	Myslinski, L. J. M. (2013). *Social media fact checking method and system* (US8458046B2). IFI CLAIMS Patent Services. https://patents.google.com/patent/US8458046B2/en?q=social+media+bias&oq=social+media+bias
Original URL	https://patents.google.com/patent/US8458046B2/en?q=social+media+bias&oq=social+media+bias
Source type	Patent
Keywords	social media bias
Summary of key points (include methodology)	System will check the correctness of information by comparing information with one or more sources. The system will constantly be monitoring and fact checking information to indicate statuses on pieces of information. Fact checking is done by comparing to a trusted source the content on social media. System automatically detects bias in social media content, stores it, and uses it to evaluate other social media content. Different sources have different values.
Research Question/Problem/ Need	There is a lot of false information on social media that gets portrayed as true without much fact-checking.

Important Figures

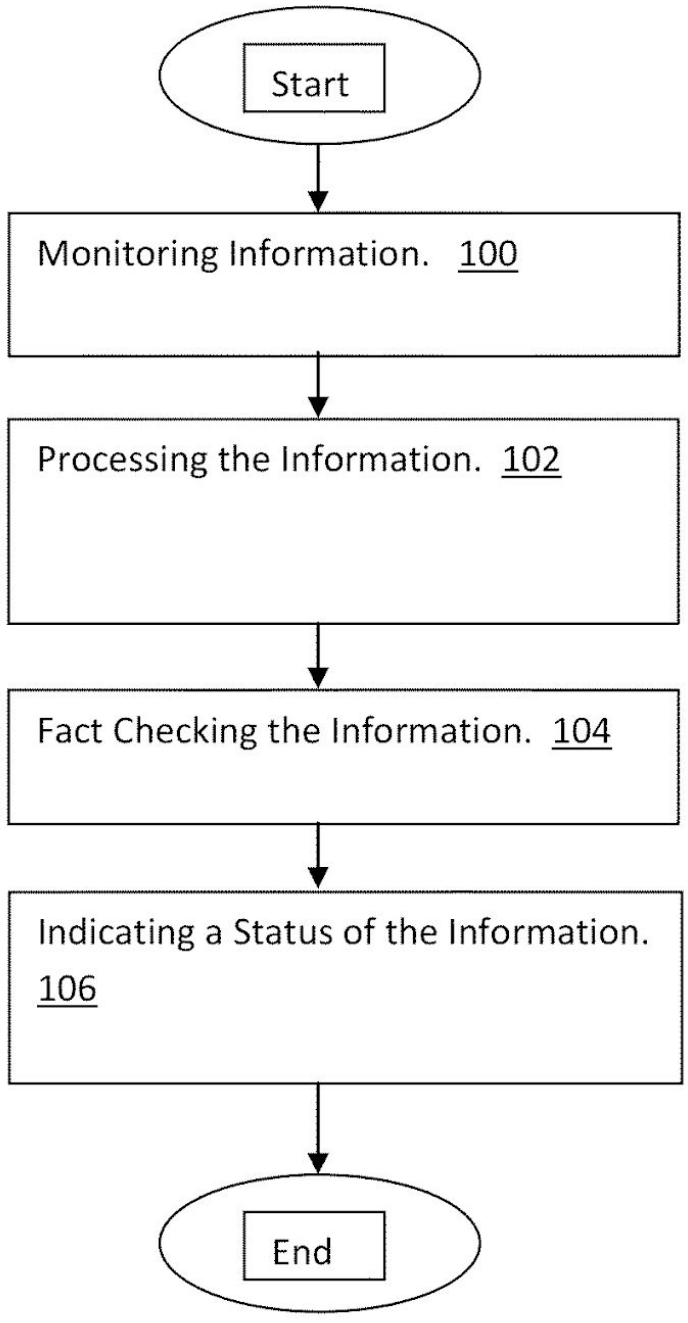


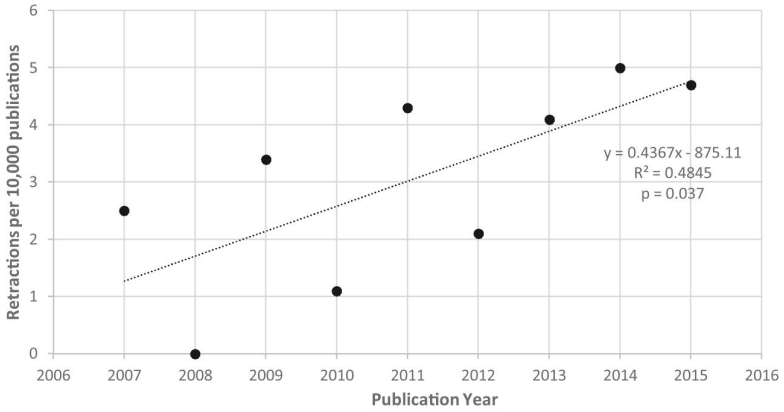
Figure 1

Notes	"The fact checking system is able to be implemented using rated sources, classified sources, a recognition system, learning, context determination, auto-correction, parallel computing and/or many other features" "The fact checking system monitors any information including, but not limited to, text, video, audio, verbal communications or any other form of communication" " In some embodiments, the sources are web pages on the Internet, one or more databases, one or more data stores and/or any other source. I" "An example of an intelligent comparison is: X criticizes Y because Y had an affair, then the intelligent comparison locates a story that indicates X had an affair two years ago. An indication of hypocrisy by X is presented." "Examples of very reliable sources include a dictionary and an encyclopedia. An example of a potentially very unreliable source includes a biased, opinion web log that fabricates stories. In some embodiments, an impartial group or organization rates the sources, or any other method of rating the sources is used. "
Cited references to follow up on	US6266664B1(Method for scanning, analyzing and rating digital information content) US20040122846A1(Fact verification system) WO2009089116A2(Systems and methods for determining the relative bias and accuracy of a piece of news)
Follow up Questions	What are recognition systems, what is context determination, auto-correction, parallel computing?

Article #5 Notes: Retraction of publications in nursing and midwifery research: A systematic T review

Article notes should be on separate sheets

Source Title	Retraction of publications in nursing and midwifery research: A systematic review
Source citation (APA Format)	Al-Ghareeb, A., Hillel, S., Mckenna, L., Cleary, M., Visentin, D., Jones, M., . . . Gray, R. (2018). Retraction of publications in nursing and midwifery research: A systematic review. *International Journal of Nursing Studies, 81*, 8-13. doi:10.1016/j.ijnurstu.2018.01.013
Original URL	https://www.sciencedirect.com/science/article/abs/pii/S0020748918300245
Source type	Journal review
Keywords	Analyzing retracted articles
Summary of key points (include methodology)	Searched for retracted articles from MEDLINE via Orvid using keywords such as : (retract* OR remove* OR recall* OR withdraw* OR 'retract* publi*'~10 OR 'remove publi*'~10 OR 'recall* publi*'~10 OR 'withdraw* publi*'~10). Then manually searched retraction watch where two researchers looked at titles and abstracts and a third researcher settled disagreements. Also used Journal citation report to calculated total number of papers published. A Scopus database then used as Medline was too hard to use.
Research Question/Problem/ Need	The numbers of retracted papers in general has been increasing.A paper is retracted because it either contains a serious error or it has scientific misconduct within it.

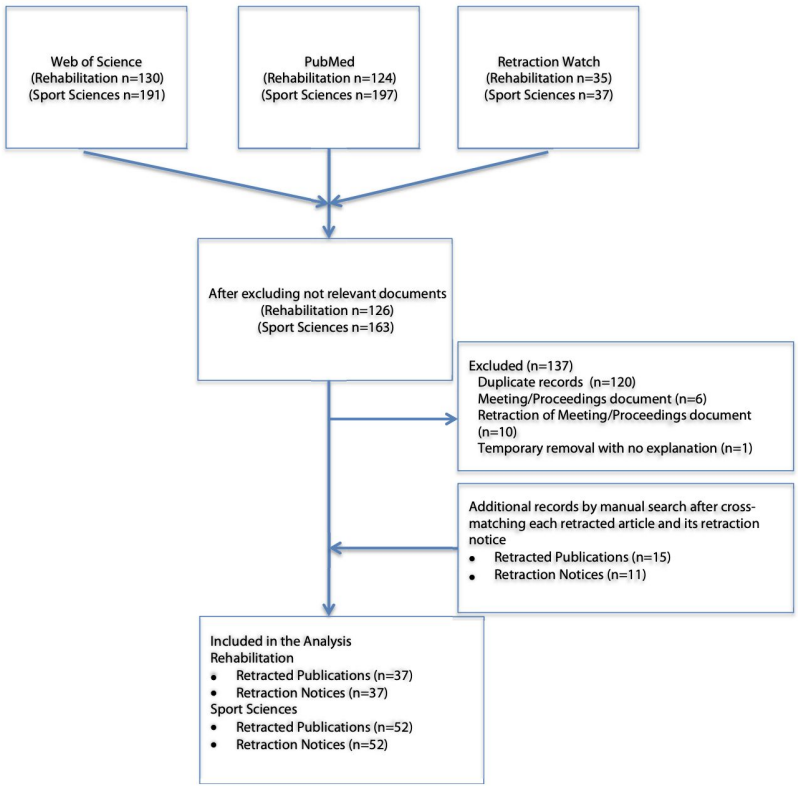
Important Figures	**What is already known about the topic?** • The number of papers published in science journals is increasing. • Seven hundred and forty-two scientific papers have been retracted since 2000. • In medicine and other science disciplines retraction is more common in journals with a higher impact factor. **What this paper adds** • Twenty-nine papers published in nursing science journals have been retracted. • No study published in a nursing science journal has been retracted because of fraud. • Nursing journals with a higher impact factor are associated with fewer retractions.  **Fig. 2.** Association between the normalised number of retracted publications per 10,000 publications against publication year.
Notes	"Duplicate publication was the most common reason for retraction (n = 18, 58%)"(Most retracted publications are due to plagiarism, not due to false information being presented. Definitely worth keeping in mind when designing methodology as plagiarism is not misinformation?) "The mean number of citations manu- scripts received after retraction was seven" 'Compared to more established academic disciplines, rates of retraction in nursing and midwifery are low. Findings suggest that unsound research is not being identified and that the checks and balances incumbent in the scientific method are not working." "In clinical pro- fessions (e.g. medicine, nursing and midwifery) retraction is a parti- cularly important issue because this research should not influence clinical practice (Davis, 2012)."(Possible importance?) "For example, Van Noorden (2011) reported that from 2001 to 2010 there was a 1000% increase in the number of retractions." "As a consequence, authors may be tempted to take short cuts, manipulate or even fabricate data (Breen, 2016; Hicks and Harris, 2016; Jackson et al., 2014)."

	Only 29 retracted papers were identified. I feel this is a somewhat small sample size “ Keywords, index terms, and filters relating to retraction were employed given the various ways MEDLINE reports retraction.” (Good idea to look up how different journals report retracted articles) “Since 2007 a total of 97,985 papers were published in the 116 included journals. There was a mean delay of 2.3 years between a paper being published and retracted. Due to this time delay between publication and retraction, it is likely that there will be an increased retraction rate in more current years identified since the search was performed.” “The total number and rate of retraction in nur- sing and midwifery, however, seems remarkably low.” “somewhat unlikely reason is that nurses have exceptionally high stan- dards in conducting research and misconduct is rare. A potentially more plausible explanation is that the academic nursing and midwifery community are failing in their duty to hold researchers to account for the conduct of their work. “ “errors are more likely to be found in this type of research and this may be a reason for the low number of retractions in nursing overall identified in this study.” “salami slicing (cutting a single study into multiple papers)” No papers retracted for fraud, leading to belief that lower rate of retractions is due to lack of academic conduct
Cited references to follow up on	Not a reference, but OVID database was mentioned(https://wkhealth.force.com/ovidsupport/s/article/How-to-search-for-Retracted-Publications) (Higgins and Green, 2008, p. 132).(method for searching database)
Follow up Questions	Why are the number of retracted articles increasing so dramatically? Should plagiarized and ethically questionable retractions be considered as promoting disinformation? How to increase the number of retracted articles found? How do the percentage of retracted articles vary amongst different disciplines? What is a Journal Citation Report

Article #6 Notes: Retractions in Rehabilitation and Sport Sciences Journals: A Systematic Review

Article notes should be on separate sheets

Source Title	Retractions in Rehabilitation and Sport Sciences Journals: A Systematic Review
Source citation (APA Format)	Kardeş, S., Levack, W., Özkuk, K., Aydın, E. A., & Karabulut, S. S. (2020). Retractions in Rehabilitation and Sport Sciences Journals: A Systematic Review. *Archives of Physical Medicine and Rehabilitation*. doi:10.1016/j.apmr.2020.03.010
Original URL	https://www.archives-pmr.org/article/S0003-9993(20)30208-2/fulltext
Source type	Journal review
Keywords	Analyzing retracted articles
Summary of key points (include methodology)	Data Sources: The Web of Science, PubMed, and Retraction Watch databases were searched from inception to August 2019. Data Extraction: One author extracted the data. Two other authors checked the data.(similar to previous article)
Research Question/Problem/ Need	What are the characteristics of retracted articles in rehabilitation and sport sciences journals.

Important Figures	
Notes	"The reasons for the retractions were more often attributed to misconduct (79% and 61%) than to honest error (21% and 39%) in rehabilitation and sport sciences, respectively" "The median time interval between publication and retraction was 622 days in rehabilitation and 607 days in sport sciences publications." "Previous reviews have analyzed retractions in the biomedical literature 4,5 in general and in a variety of specific medical fields in particular, including cancer research,6 dentistry,7,8 drug literature,9 emergency medicine,10 intensive care medicine,11 nursing and midwifery,12 surgery,13,14 neurosurgery,15 obstetrics and gynecology,16 orthopedics,17,18 plastic surgery,19 radiation oncology,20 21 4 22 radiology, rheumatology, and urology. "retracted publications that were published in rehabilitation or sport sciences journals indexed in the Science Citation Index Expanded (SCIE) and Social Sciences Citation Index (SSCI) were eligible for the study." "Web of Science

	25 1 includes all SCIE and SSCI journals and their publications." "the journals' titles were searched in the "Journal" tab with the filter of "Retraction" in "Nature of Notice" tab for retractions." "plagiarism was the top reason in both rehabilitation and sport sciences journals, followed by authorship disputes and inappropriate author assignment, data fabrication, and ethical issues." "Nearly half of the retracted publications continued to be cited after they had been retracted in rehabilitation and sport sciences Journals." "some citations may reference and correct past false assumptions and ideas. Therefore, a further study aimed to classify the context of each citation to the retracted publications after retraction as positive, negative, or neutral is warranted " "retractions were more often the result of misconduct than honest error"
Cited references to follow up on	Follow up on: (6-8,10,12,15-18,20-22) They may contain methods for classifying context in which articles are cited.
Follow up Questions	

Article #7 Notes: Review of the Transgender Literature: Where Do We Go from Here?

Article notes should be on separate sheets

Source Title	Review of the Transgender Literature: Where Do We Go from Here?
Source citation (APA Format)	Wanta, J. W., & Unger, C. A. (2017). Review of the Transgender Literature: Where Do We Go from Here? *Transgender Health, 2*(1), 119-128. doi:10.1089/trgh.2017.0004
Original URL	https://www.liebertpub.com/doi/full/10.1089/trgh.2017.0004
Source type	Review article
Keywords	analyzing retracted articles
Summary of key points (include methodology)	"Surveyed all Medline-available articles up to June 2016 using a combination of medical subject headings and keywords in titles and abstracts. Articles meeting inclusion criteria were reviewed, categorized, and analyzed for content and study design." "Significant knowledge gaps were found across the subspecialties, and there was a lack of prospective robust research and representation of transgender-specific data in the core medical journals. More data and research are needed to bridge the knowledge gaps that currently exist and improve the care of the transgender community."
Research Question/Problem/ Need	

Important Figures

Topic	Total No. of publications	Percent of total
Epidemiology	46	1.9
Surgery	440	18.3
Mental health	260	10.8
Endocrinology and hormones	297	12.3
Cancer	41	1.7
HIV care	128	5.3
Reproduction	22	0.9
Sexuality	63	2.6
Linguistics/voice	61	2.5
Pediatrics	187	7.8
Aging/elderly	11	0.5
Law	55	2.3
Incarceration	13	0.5
Education	13	0.5
Bioethics	53	2.2

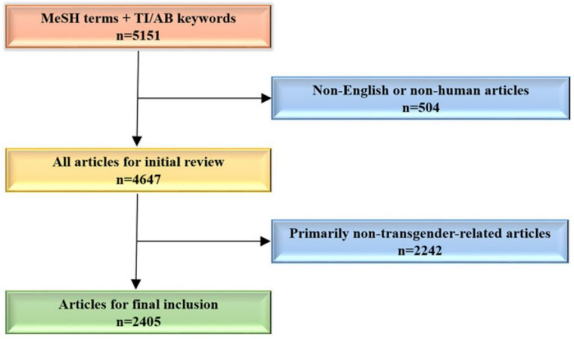


FIG. 1. Graphical depiction of search strategy and selection process.

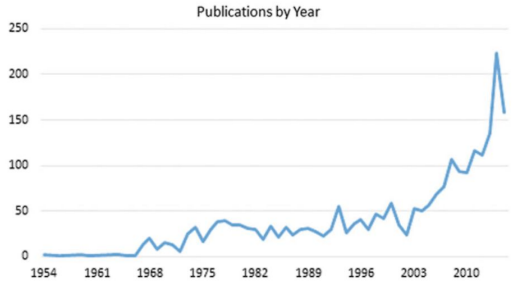
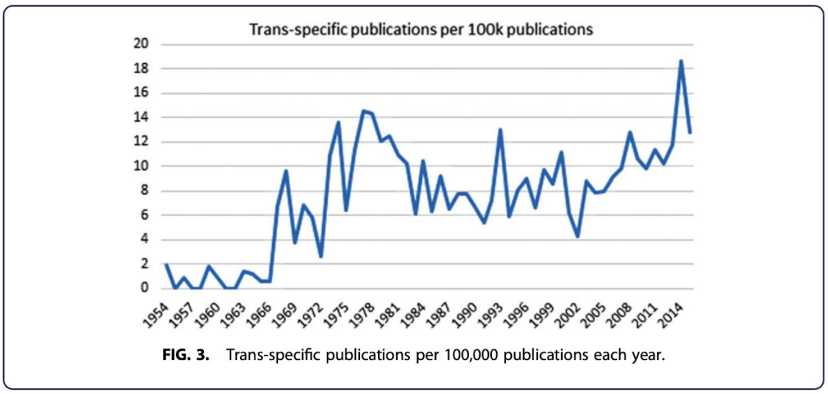


FIG. 2. Total number of trans-centric publications by year.

	 **FIG. 3.** Trans-specific publications per 100,000 publications each year.
Notes	"In fact, there is a lack of research across the board for the transgender commu- nity, from surgery and mental health to pediatric and ge- riatric care" "The following keywords were included in our search: trans- gender, transsexual, gender dysphoria, gender identity disorder, sex reassignment procedure, sex reassignment surgery, genderqueer, gender reassignment, gender con- firmation, sex change, intersex, and gender change."(Good list of keywords to search from) Usage of MeSH terms will be very helpful Only 5151 articles were identified "Between 2010 and 2015, publications from Table 1. Topics by Total Number of Articles and as a Percentage of the 2405 Trans-Centric Articles these four journals account for just 0.66% of all Medline- available articles, but 2% of trans-specific articles. "
Cited references to follow up on	
Follow up Questions	Did the researchers manually go through each of the articles to determine if they were related to transgender issues? How long did it take them to do that?

Article #8 Notes: Misinformation and Its Correction: Continued Influence and Successful Debiasing

Article notes should be on separate sheets

Source Title	Misinformation and Its Correction: Continued Influence and Successful Debiasing
Source citation (APA Format)	Lewandowsky, S., Ecker, U. K., Seifert, C. M., Schwarz, N., & Cook, J. (2012). Misinformation and Its Correction. *Psychological Science in the Public Interest, 13*(3), 106-131. doi:10.1177/1529100612451018
Original URL	https://journals.sagepub.com/doi/full/10.1177/1529100612451018
Source type	Journal article
Keywords	misinformation, false beliefs, memory updating, debiasing
Summary of key points (include methodology)	Disinformation such as beliefs of vaccines causing autism are troubling. This study looks at how misinformation spreads,both intentional and unintentional. Psychology is also applied a little to better understand this phenomena. Then, the paper goes into how misinformation can be stopped/ corrected.
Research Question/Problem/ Need	How does misinformation spread and what can be done to combat it?
Important Figures	
Notes	“Nonetheless, in 2002, between 20% and 25% of the public continued to believe in the vaccine- autism link, and a further 39% to 53% continued to believe there was equal evidence on both sides of the debate (Hargreaves, Lewis, & Speers, 2003).” (Is this really true?)

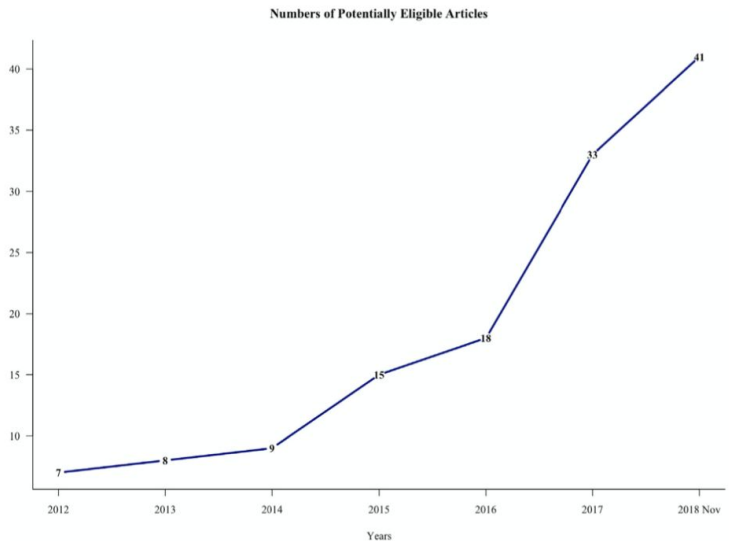
	Contains several good examples of the effects of misinformation that like vaccines and autism and listerine. “first by highlighting the societal costs of widespread misinformation, and then by turning to the societal processes that permit its spread.” “Ignorance, too, can have obvious detrimental effects on decision making, but, perhaps surprisingly, those effects may be less severe than those arising from reliance on misinformation.” “For example, those who most vigorously reject the scientific evidence for climate change are also those who believe they are best informed about the subject (Leiserowitz, Maibach, Roser-Renouf, & Hmielowski, 2011).” “With regard to new media, the Internet has placed immense quantities of information at our fin- gertips, but it has also contributed to the spread of misinformation. “ “informa- tion that will evoke an emotional response in the recipient, irrespective of the information’s truth value. Emotional arousal in general increases people’s willingness to pass on informa- tion” “A related but perhaps more surprising source of misinfor- mation is literary fiction. 90% of books published between 1972 and 2005 that expressed skepticism about environmental issues have been linked to conservative think tanks (Jacques et al., 2008). “media (broadly defined to include print newspapers and maga- zines, radio, TV, and the Internet)” “the overwhelming majority (more than 95%; Anderegg, Prall, Harold, & Schneider, 2010; Doran & Zimmerman, 2009) of actively publishing climate scientists agree on the fundamental facts that the globe is warming and that this warming is due to greenhouse-gas emissions caused by humans; yet the contrarian opinions of nonexperts are fea- tured prominently in the media” “asym- metric choice of “experts” leads to the perception of a debate about issues that were in fact resolved in the relevant scientific literature long ago.” “In 2009, 61% of American adults looked online for health information (Fox & Jones, 2009). “

	"Worse yet, why can attempts at retraction backfire, entrenching belief in misinformation rather than reducing it?"(Question to ask) "...listeners proceed on the assumption that speakers try to be truthful, relevant, and clear, unless evidence to the contrary calls this default into question " "we have shown that simply retracting a piece of infor- mation will not stop its influence."
Cited references to follow up on	The novel misrepre- sented the science of global climate change but was neverthe- less introduced as "scientific" evidence into a U.S. Senate committee (Allen, 2005; Leggett, 2005). "The growth of cable TV, talk radio, and the Internet have made it easier for people to find news sources that support their existing views, a phenomenon known as selective exposure (Prior, 2003)"
Follow up Questions	

Article #9 Notes: Systematic Literature Review on the Spread of Health-related Misinformation on Social Media

Article notes should be on separate sheets

Source Title	Systematic Literature Review on the Spread of Health-related Misinformation on Social Media
Source citation (APA Format)	Wang, Y., Mckee, M., Torbica, A., & Stuckler, D. (2019). Systematic Literature Review on the Spread of Health-related Misinformation on Social Media. Social Science & Medicine, 240, 112552. doi:10.1016/j.socscimed.2019.112552
Original URL	https://www-sciencedirect-com.ezpxy-web-p-u01.wpi.edu/science/article/pii/S0277953619305465
Source type	Literature Review
Keywords	Misinformation Fake news Health Social media
Summary of key points (include methodology)	Misinformation has always existed, though with the advent of the internet, its presence has grown significantly. This is due to the instant communication and the ability for new ideas to spread so rapidly. Sensationalized news may drown out sometimes more boring accurate information. In particular, misinformation relating to health has been on the rise and social media has been the main source of relaying this misinformation. More cross-field collaboration is needed to look at a wider variety of health-related misinformation.
Research Question/Problem/	What does the current literature on health-related misinformation say and where is it lacking?

Need	
Important Figures	 **Fig. 2.** Numbers of potentially eligible articles.
Notes	"Misinformation involves information that is inadvertently false and is shared without intent to cause harm," "they should also be explored in empirical studies, and especially those that use big data from social media platforms." In "Many designs were also complemented by sentiment measures, for instance, the "anti- vaccine" sentiment (Bahk et al., 2016; Xu and Guo, 2018)."(Look at how they used it) "only a handful of papers proposed specific and tested in- terventions to reduce misinformation spread."(Extension for my project?) "it is politically incorrect to question or criticize the belief of others" "broad consensus that misinformation is highly prevalent on social media and tends to be more popular than accurate information, while its narrative often induces fear, anxiety and mistrust in institutions" "efforts to retract misinformation need to be carried out with caution in order to prevent backfiring"
Cited references to follow up on	Bahk et al., 2016; Xu and Guo, 2018

Follow up Questions	What is sentiment analysis? How does sentiment analysis work?(will it be very useful in the project?)

Article #10 Notes: Detailed sentiment analysis

Article notes should be on separate sheets

Source Title	Detailed sentiment analysis
Source citation (APA Format)	Rehling, J. A., & Dignan, T. G. (2012, March 6). US8463595B1 - Detailed sentiment analysis. Retrieved October 16, 2020, from https://patents.google.com/patent/US8463595B1/en?q=sentiment+analysis&oq=sentiment+analysis
Original URL	https://patents.google.com/patent/US8463595B1/en?q=sentiment+analysis&oq=sentiment+analysis
Source type	Patent
Keywords	Marketing, e.g. market research and analysis, surveying, promotions, advertising, buyer profiling, customer management or rewards; Price estimation or determination
Summary of key points (include methodology)	Sentiment analysis done by taking preliminary scores for a piece of text, and then revising that score and updating a secondary score. One approach for doing this is by using machine learning.
Research Question/Problem/ Need	How can one use computer algorithm to classify sentiment of pieces of text

Important Figures

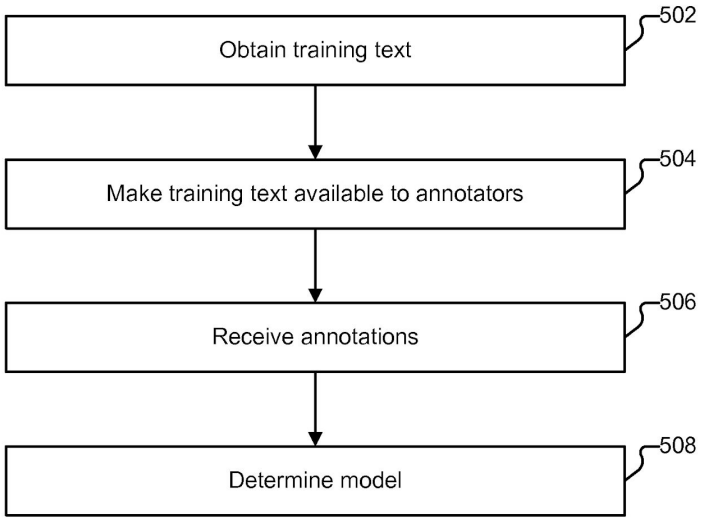


FIG. 5

Feature	Dimension	Negative	Neutral	Positive
knee injury	Health	-7.25	-15.56	-10.71
a successful	Business	-11.72	-11.20	-8.73
Charity	Ethical	-10.28	-11.53	-7.03
Bankruptcy	Business	-7.78	-10.87	-9.87
be sentence to	Legal	-6.86	-15.40	
Olympic champion	Health	-10.90	-10.80	-9.83
Unemployed	Business	-7.94	-10.49	-12.21
Profitable	Business	-8.72	-12.31	-8.55
Illegal	Legal	-7.74	-11.34	
The	Personal	-10.58	-10.43	-10.51

FIG. 7

700

Feature	Dimension	Negative	Neutral
.	Legal	-10.78	-10.83
arrest	Legal	-7.00	-12.79
arrest for	Legal	-7.05	-12.53
be	Legal	-10.55	-10.84
be arrest	Legal	-6.92	-13.51
be arrest for	Legal	-7.16	-12.14
do	Legal	-11.08	-10.83
do the	Legal	-11.47	-10.82
do the right	Legal	-10.59	-10.84
for	Legal	-10.69	-10.84
for do	Legal	-10.76	-10.83
i	Legal	-11.98	-10.82
i be	Legal	-11.54	-10.82
right	Legal	-11.89	-10.82
right thing	Legal	-10.91	-10.83
right thing .	Legal	-10.11	-10.85
the	Legal	-10.89	-10.83
the right	Legal	-14.07	-10.81
the right thing	Legal	-10.91	-10.83
thing	Legal	-11.16	-10.83
thing .	Legal	-12.72	-10.82
TOTAL		**-220.23**	**-235.06**

FIG. 11

Notes

"Sentiment analysis techniques can be used to assign a piece of text a single value that represents opinion expressed in that text."

"One problem with existing sentiment analysis techniques is seen when the text being evaluated expresses two independent opinions, such as in the following: "Bob is a terrible trumpet player, but the cookies he bakes taste great!"

"scope of the invention is limited only by the claims and the invention encompasses numerous alternatives, modifications and equivalents."

"detailed sentiment analysis" techniques for summarizing subjective or affective opinions in text across multiple dimensions. "

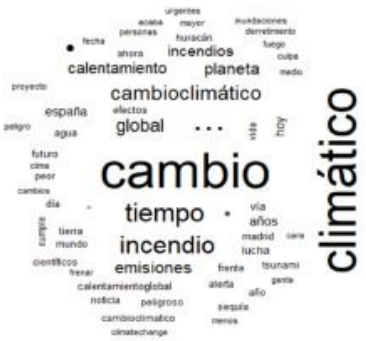
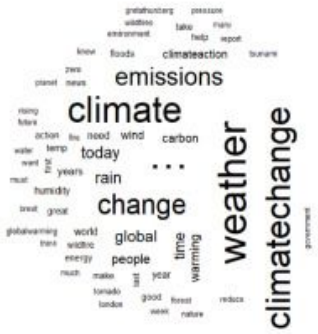
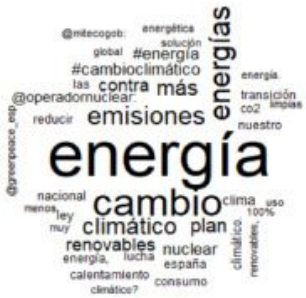
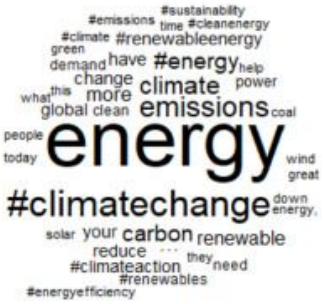
"Also suppose that the four dimensions in which the detailed sentiment analysis is performed include "Business," "Legal," "Vice," and "Malfunction."(Takes a look at many different dimensions)

Cited references to follow up on	US20120259617A1
Follow up Questions	Is there a way to use sentiment analysis to determine bias?

Article #11 Notes: Sensing climate change and energy issues: Sentiment and emotion analysis with social media in the U.K. and Spain

Article notes should be on separate sheets

Source Title	Sensing climate change and energy issues: Sentiment and emotion analysis with social media in the U.K. and Spain
Source citation (APA Format)	Loureiro, M. L., & Alló, M. (2020). Sensing climate change and energy issues: Sentiment and emotion analysis with social media in the U.K. and Spain. Energy Policy, 143, 111490. doi:10.1016/j.enpol.2020.111490
Original URL	https://www.sciencedirect.com/science/article/pii/S0301421520302366
Source type	Journal Article
Keywords	Climate changeEnergy policiesEmotionsSentiment analysisSocial mediaTwitter
Summary of key points (include methodology)	Assess the emotions and reactions on social media within the first 6 months of the 2019 towards climate change. In particular, Twitter messages were analyzed using sentiment analysis. The results corroborate with those found in surveys done increasing the probable reliability of sentiment analysis as a useful tool.
Research Question/Problem/ Need	How can social media be effectively analyzed using sentiment analysis to provide effective information that can then be used to do things like policy creation?

Important Figures	   
Notes	Our focus will be precisely on generating information related to social concerns about the perceptions towards climate change and energy issues from social media “The scalable nature of data collection and data processing allows for replication in multiple countries with multiple languages” “finding a relationship between the proximity to the hurricane Sandy's path and social media activity” “we first summarize the main content of the conversations, using word clouds and frequencies of words.”(possibly cool diagram for my project) “he NRC Emotion Lexicon contains a list of English words and their associations with eight basic emotions (anger, fear, anticipation, trust, surprise, sadness, joy, and disgust) and two main sentiments (negative and positive)”(Will look more into this) “Data downloads have been made through the library Tweepy for Phyton which works with the Twitter Streaming API, specifying a “keyword” or specific “hashtag””(Can I use this for collecting my data?) “GenderAPI (GenderAPI, 2019) was employed. This API can detect

	gender from social media by querying usernames." "The main purpose of the cleaning process has been to remove from the analysis all the information that was not relevant to our research topic. For this objective, the following exclusion criteria were defined:"(I will most likely have to define exclusion criteria as well)
Cited references to follow up on	Russell et al. (2011) https://www.sciencedirect.com/science/article/pii/S0301421520302366#bib18 Pearce et al. (2014) https://www.sciencedirect.com/science/article/pii/S0301421520302366#bib15 Mohammad and Turney, 2013 https://www.sciencedirect.com/science/article/pii/S0301421520302366#bib14 (GenderAPI, 2019) https://www.sciencedirect.com/science/article/pii/S0301421520302366#bib6
Follow up Questions	How accurate is GenderAPI

Article #12 Notes: Sentiment Analysis of Social Media Twitter with Case of Anti-LGBT Campaign in Indonesia using Naïve Bayes, Decision Tree, and Random Forest Algorithm

Article notes should be on separate sheets

Source Title	Sentiment Analysis of Social Media Twitter with Case of Anti-LGBT Campaign in Indonesia using Naïve Bayes, Decision Tree, and Random Forest Algorithm

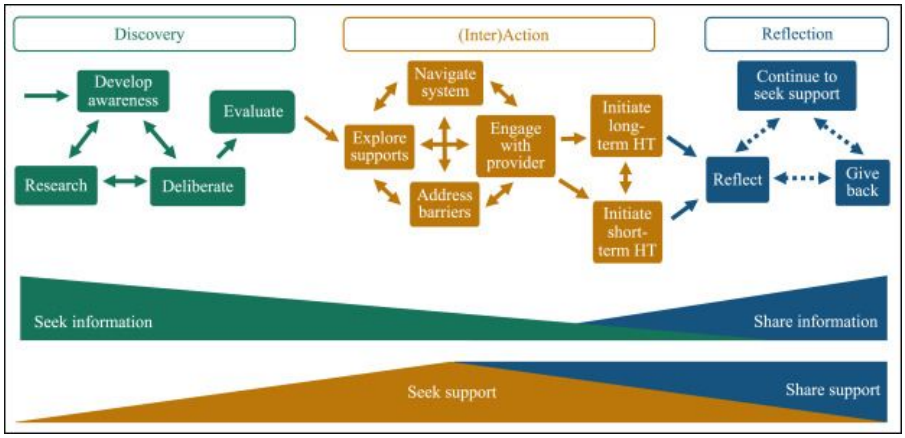
Source citation (APA Format)	Fitri, V. A., Andreswari, R., & Hasibuan, M. A. (2019). Sentiment Analysis of Social Media Twitter with Case of Anti-LGBT Campaign in Indonesia using Naïve Bayes, Decision Tree, and Random Forest Algorithm. Procedia Computer Science, 161, 765-772. doi:10.1016/j.procs.2019.11.181
Original URL	https://www.sciencedirect.com/science/article/pii/S1877050919318927
Source type	Journal Article
Keywords	TwitterNaïve BayesAnti-LGBT campaign sentiment analysis
Summary of key points (include methodology)	Submissions on social media can be categorized into positive, negative, or neutral categories based on their content. The Naive Bayes algorithm is used in this study to analyze the general sentiment towads the anti-lgbt campaign within Indonesia. Overall sentiment analysis reveals that Twitter users from Indonesia generally give a more neutral stance on anti-lgbt.
Research Question/Problem/ Need	How can sentiment analysis be applied to twitter to analyze the general sentiment towards lgbt within Indonesia?
Important Figures	
Notes	"Positive sentiments express a good opinion on a context, negative sentiments express bad opinions in a context, while neutral sentiments state things that do not favor good or bad." " Lesbians are homosexuality among women. Gay is homosexuality among men. Bisexuality is a state of feeling equally attracted to both sexes, women, and men [3]. Lesbian, gay, bisexual and transgender (LGBT) behavior is still a sensitive problem in Indonesia"(disputable statements towards bisexuality. Also, no description of transgender for some reason?) "As one of the main fields in data mining, Text Mining aims to find previously unknown but potentially useful knowledge from unstructured or semi-structured text data [8]. Text mining also faces problems such as large amounts of data, high dimensions, data and structures that are constantly changing, and data "noise." "Sentiment analysis is a research branch of text mining"

	"Sentiment analysis is defined as the task of finding the author's opinion about a particular entity."(good quote?) "can be based on and assessed at the level of documents, sentences, or words" " After classification, then preprocessing data, including data cleansing, folding cases, tokenization, stop words removal, and stemming" "The data used in this study are comments/tweets of Indonesian people on Twitter that are taken using Python, then saved into CSV format files."(I know some python. Maybe copy some of their methodology?) "The computational time of this algorithm is about 15 seconds."(RapidMiner is a pretty fast program) "The result of true negative and true positive is 0 because there is a gap in the amount of neutral data that is far away."(This does not seem right) " many misspelling and many abbreviations and slang words that cannot be processed when preprocessing data. " "From 936 testing data, there are 703 comments with the neutral sentiment, then 102 comments with positive sentiment, and 4 comments with negative Sentiment." :("This undergraduate final project publication…"(Undergrad project? Is this a reliable source? Many grammatical errors/ inconsistencies makes me doubt the reliability of this study)
Cited references to follow up on	Look at RapidMiner
Follow up Questions	So what is text-mining if sentiment analysis is a subcategory of text-mining Which level of assessment will be most useful for my project?(document,sentences. words) Why does the article not elaborate on "data cleansing, folding cases, tokenization, stop words removal, and stemming"? How reliable of a source is an undergrad project?

Article #13 Notes: Hormone therapy decision-making processes: Transgender youth and parents

Article notes should be on separate sheets

Source Title	Hormone therapy decision-making processes: Transgender youth and parents
Source citation (APA Format)	Clark, B. A., Marshall, S. K., & Saewyc, E. M. (2020). Hormone therapy decision-making processes: Transgender youth and parents. Journal of Adolescence, 79, 136-147. doi:10.1016/j.adolescence.2019.12.016
Original URL	https://www-sciencedirect-com.ezpxy-web-p-u01.wpi.edu/science/article/pii/S014019711930243X#bib4
Source type	Journal Article
Keywords	Transgender personsAdolescentParentsDecision-makingHealth behaviorHealth services for transgender persons
Summary of key points (include methodology)	Twenty-one patients aged 14-18 created lifeline drawings (figures showing highs and lows of life) and were interviewed to find out how their process of obtaining hormonal replacement therapy went(HRT). Three main phases are identified due to the above methods, which are first discovery, seeking care, and finally reflection on HRT. However, throughout the process two main barriers often faced were systemic based barriers and parental barriers. A new barrier that was identified was parental approval being a necessary component for youths to move forward with the process, limiting some youths abilities to do so.
Research Question/Problem/ Need	What are the decision making processes for transgender youths and their parents in getting in hormone therapy

Important Figures	
Notes	“Awareness and acceptance of transgender (trans) experiences has expanded in recent years, but has been accompanied by contentious public discourse surrounding validity of the existence of trans people and provision of gender-affirming medical care for trans youth”(Boylan, 2019; Green, Benner, & Pear, 2018). Very small sample size of only 21, however thorough interviews conducted “ It is important to note, however, that both youth and parent participants described situations in which parents who were unsupportive of gender health goals remained supportive of their youth in other areas of their lives.” “In reflecting on their journeys, youth frequently described having a sense of accomplishment, pride, or satisfaction with their ability to ultimately access the care they needed. This contrasted with the frustration characteristic of narratives of participants who had not been able to access hormone therapy.” “ Thus, parents engaged simultaneously in discovery and (inter)action tasks, as illustrated in Fig. 2. Examples of decisions made by parents included: to support their youth in seeking hormone therapy; to trust their youth to know who they were; that their youth should make their own health care decisions; to support their youth's autonomy without supporting hormone therapy; and to advocate for needed care.” “The parents who chose to participate in this research were largely supportive of their youth's gender and choice to access hormone therapy at the time of the interview; therefore, the experiences described by parents are not reflective of the breadth of youth experiences, particularly surrounding parental barriers to hormone therapy.” (Good point, biased sampling of data)

Cited references to follow up on	J.F. Boylan Opinion: Coming out as trans isn't a teenage fad The New York Times (2019, January 8) Retrieved from https://www.nytimes.com/2019/01/08/opinion/trans-teen-transition.html
Follow up Questions	Does misinformation from retracted scientific journal articles play into this issue at all?

Article #14 Notes: 'Transgender' Could Be Defined Out of Existence Under Trump Administration

Article notes should be on separate sheets

Source Title	'Transgender' Could Be Defined Out of Existence Under Trump Administration
Source citation (APA Format)	Green, E. L., Benner, K., & Pear, R. (2018, October 21). 'Transgender' Could Be Defined Out of Existence Under Trump Administration. Retrieved November 1, 2020, from https://www.nytimes.com/2018/10/21/us/politics/transgender-trump-administration-sex-definition.html
Original URL	https://www.nytimes.com/2018/10/21/us/politics/transgender-trump-administration-sex-definition.html
Source type	News Article
Keywords	N/A
Summary of key points (include methodology)	Ever since President Trump has taken office, he has begun to rollback protections established by the Obama administration for transgender peoples. Some of these moves include things like barring transgender people from serving in the military and sending out memos defining gender as sex assigned at birth save for genetic

	testing evidence. The moves made frighten transgneder communities and at the same time goes against many previous federal court decisions, most notably centering around Title IX and interpretations about protections of “sex”.
Research Question/Problem/ Need	Reporting on the moves made by the Trump Administration that, whether intentionally or not, harm transgender individuals.
Important Figures	
Notes	“The Trump administration is considering narrowly defining gender as a biological, immutable condition determined by genitalia at birth, the most drastic move yet in a governmentwide effort to roll back recognition and protections of transgender people under federal civil rights law.” (Contentious nature of this subject is perfect for studying how science is being used to justify both sides of the argument, oftentimes being misinterpreted or just plain wrong.) “The department argued in its memo that key government agencies needed to adopt an explicit and uniform definition of gender as determined ‘on a biological basis that is clear, grounded in science, objective and administrable.’” “Any dispute about one’s sex would have to be clarified using genetic testing.” “The Trump administration has sought to bar transgender people from serving in the military and has legally challenged civil rights protections for the group embedded in the nation’s health care law.” “Mr. Severino, while serving as the head of the DeVos Center for Religion and Civil Society at the Heritage Foundation, was among the conservatives who blanched at the Obama administration’s expansion of sex to include gender identity, which he called ‘radical gender ideology.’”
Cited references to follow up on	
Follow up Questions	Were there any scientific studies used to justify the Trump administrations decisions, and if so what were they?

Article #15 Notes: The MMR vaccine and autism: Sensation, refutation, retraction, and fraud

Article notes should be on separate sheets

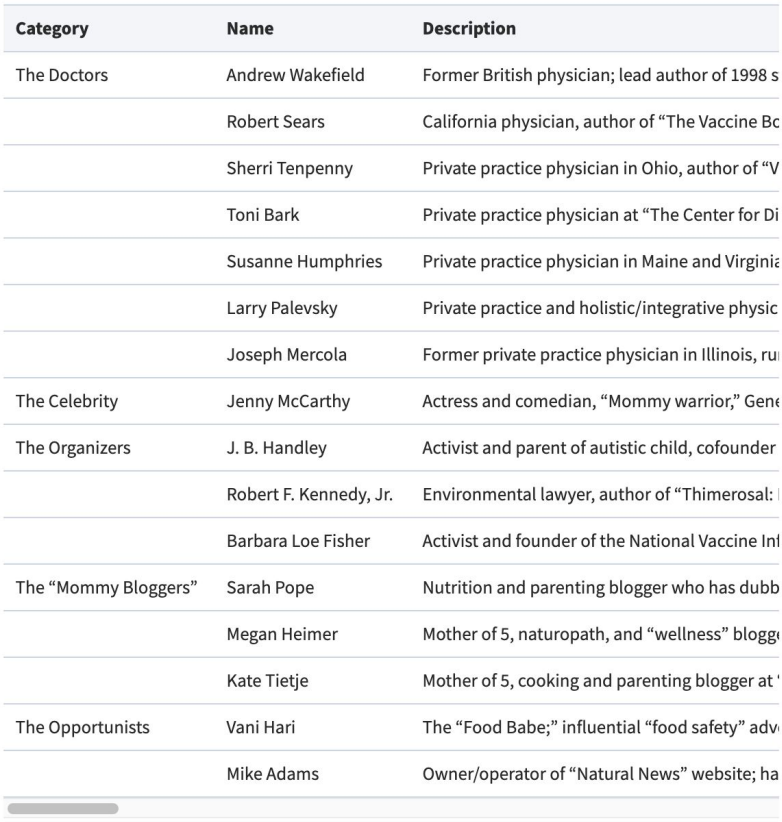
Source Title	The MMR vaccine and autism: Sensation, refutation, retraction, and fraud
Source citation (APA Format)	Rao, T. S. S., & Andrade, C. (2011). The MMR vaccine and autism: Sensation, refutation, retraction, and fraud. Indian Journal of Psychiatry, 53(2), 95–96. https://doi.org/10.4103/0019-5545.82529
Original URL	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136032/
Source type	Journal Article
Keywords	Anti-Vaccination Misinformation
Summary of key points (include methodology)	Despite being almost immediately challenged as well as having a small sample size, the Wakefield study purporting “vaccines cause autism” was able to remain relevant for many years. The paper was only completely retracted in 2010, despite being published in 1998. His paper has had measurable effects, one of which was outbreaks of measles in 2008 and 2009 tied to anti-vaccination beliefs. His paper was costly to the scientific community and the world as a whole, and is a reminder of the importance of scientific integrity for researchers to keep in mind when performing their own experiments and such.
Research Question/Problem/ Need	What was the story of Wakefield’s retracted paper in terms of sensation, refutation, retraction, and its effects today?
Important Figures	
Notes	“Despite the small sample size (n=12), the uncontrolled design, and the speculative nature of the conclusions, the paper received wide publicity, and MMR vaccination rates began to drop because parents were concerned about the risk of autism after vaccination.” “The Lancet completely retracted the Wakefield et al.[1] paper in February 2010, admitting that several elements in the paper were

	incorrect, contrary to the findings of the earlier investigation.[7] Wakefield et al.[1] were held guilty of ethical violations (they had conducted invasive investigations on the children without obtaining the necessary ethical clearances) and scientific misrepresentation (they reported that their sampling was consecutive when, in fact, it was selective).” (What took them so long to retract? The Lancet is a highly respected journal even back then. “The final episode in the saga is the revelation that Wakefield et al.[1] were guilty of deliberate fraud (they picked and chose data that suited their case; they falsified facts).” “Scientists and organizations across the world spent a great deal of time and money refuting the results of a minor paper in the Lancet and exposing the scientific fraud that formed the basis of the paper. Appallingly, parents across the world did not vaccinate their children out of fear of the risk of autism, thereby exposing their children to the risks of disease and the well-documented complications related thereto. Measles outbreaks in the UK in 2008 and 2009 as well as pockets of measles in the USA and Canada were attributed to the nonvaccination of children.[7] The Wakefield fraud is likely to go down as one of the most serious frauds in medical history.[9]” (Good example for effects of misinformation from a retracted scientific journal article)
Cited references to follow up on	
Follow up Questions	Were there any other scientific journal articles that claimed a link between autism and vaccinations or was this the only one?

Article #16 Notes: Vaccine Rejection and Hesitancy: A Review and Call to Action

Article notes should be on separate sheets

Source Title	Vaccine Rejection and Hesitancy: A Review and Call to Action
Source citation (APA Format)	Smith T.C. (2017). Vaccine Rejection and Hesitancy: A Review and Call to Action | Open Forum Infectious Diseases | Oxford Academic. Retrieved November 23, 2020, from https://academic.oup.com/ofid/article/4/3/ofx146/3978712
Original URL	https://academic.oup.com/ofid/article/4/3/ofx146/3978712
Source type	Review article from an excerpt of a book
Keywords	antivaccination, internet, misinformation, vaccine denial, vaccine hesitancy
Summary of key points (include methodology)	Though doubts about vaccines have existed since the 18th century, there has been somewhat of a resurgence in the past decade. This has already had real impacts like small outbreaks of measles, which is entirely preventable with vaccines. One reason for this may be because the experts in the field of vaccination do not often have contact with the general populace— instead health care professionals are more often talked to. Scientists also loathe to put the world in black and white as anti-vaccination promoters will do. As such, it may be important to more strongly promote the effects of vaccination to better combat efforts made by anti-vaccination groups.
Research Question/Problem/ Need	How can scientists and researchers better combat the issue of declining confidence in vaccine effectiveness amongst the general public?

Important Figures	**Table 2.** Thought Influencers in the Antivaccine Movement 

Category	Name	Description
The Doctors	Andrew Wakefield	Former British physician; lead author of 1998 s
	Robert Sears	California physician, author of "The Vaccine Bc
	Sherri Tenpenny	Private practice physician in Ohio, author of "V
	Toni Bark	Private practice physician at "The Center for Di
	Susanne Humphries	Private practice physician in Maine and Virginia
	Larry Palevsky	Private practice and holistic/integrative physic
	Joseph Mercola	Former private practice physician in Illinois, ru
The Celebrity	Jenny McCarthy	Actress and comedian, "Mommy warrior," Gene
The Organizers	J. B. Handley	Activist and parent of autistic child, cofounder
	Robert F. Kennedy, Jr.	Environmental lawyer, author of "Thimerosal:
	Barbara Loe Fisher	Activist and founder of the National Vaccine Inf
The "Mommy Bloggers"	Sarah Pope	Nutrition and parenting blogger who has dubb
	Megan Heimer	Mother of 5, naturopath, and "wellness" blogg
	Kate Tietje	Mother of 5, cooking and parenting blogger at '
The Opportunists	Vani Hari	The "Food Babe;" influential "food safety" adv
	Mike Adams	Owner/operator of "Natural News" website; ha

Abbreviations: CDC, Centers for Disease Control and Prevention; DPT, dissatisfied parents together; HPV, human papillomavirus; MMR vaccine, measles, mumps, and rubella.

Notes	"Although the most current iteration of this scare can be traced to the publication of Andrew Wakefield's (since-retracted) paper linking the measles-mumps-rubella (MMR) vaccine to autism in 1998, anti-immunization sentiment in reality predates the process of vaccination, dating back to objections to the process of variolation in the early 18th century to reduce smallpox morbidity and mortality [1, 2]." (So push-back against vaccinations has existed for a while now, but has been supported in its modern day mainly by Wakefield's paper.) "Areas with low vaccination rates have resulted in localized outbreaks of vaccine-preventable diseases, including measles and pertussis [5]." (Corroborates information from source above) "Although public health and medical practitioners have been concerned about increasing antivaccine sentiment, programs that have been implemented to change minds and attitudes have been largely ineffective [8, 9]." (Wonder why this is)

	" A recent article in Natural Mother Magazine makes it explicit that antivaccine advocates should use language that frames vaccines as dangerous or unnatural, substituting "vaccine-free" or "intact immune system" for "unvaccinated", and "vaccine-associated diseases" instead of "vaccine-preventable diseases" [11], for instance." (Sort of like using euphemisms or the 1984 Doublespeak) "lthough only 19% of parents noted "concerns about vaccines" in a 2000 survey [15], by 2009, 50% of parents had concerns [16] (reviewed in [17])." (I wonder if fully retracting Wakefield's paper had any effect on the 50% stat) ". Collectively, this "influencer" group has undue sway over the media when it comes to vaccine information, becaue some media stories on vaccination strive for "balance" in reporting. Although this idea of "balance" is false [18]—far more physicians and scientists support vaccines than not—the same antivaccine individuals are interviewed for news pieces repeatedly, increasing their exposure and profile in the news media." (Interesting concept of how sometimes by placing two people on equal footing and giving them the same credibility in the eyes of the viewer may ultimately influence the conclusion reached by the viewer) " Recent work has demonstrated that approximately 80% of individuals use the internet yearly to search for health information [19], and relatively few discuss these findings with a healthcare professional." (more evidence for the prolific nature of the Internet in promoting misinformation? Not really social media but could somehow tie it in)
Cited references to follow up on	
Follow up Questions	

Article #17 Notes: An alarming retraction rate for scientific publications on Coronavirus Disease 2019 (COVID-19)

Article notes should be on separate sheets

Source Title	An alarming retraction rate for scientific publications on Coronavirus Disease 2019 (COVID-19)
Source citation (APA Format)	Yeo-Teh, N. S., & Tang, B. L. (2020). An alarming retraction rate for scientific publications on coronavirus disease 2019 (COVID-19). Accountability in Research, 1-7. https://doi.org/10.1080/08989621.2020.1782203
Original URL	https://www.tandfonline.com/doi/full/10.1080/08989621.2020.1782203
Source type	Journal article
Keywords	Coronavirus Disease 2019 (COVID-19), pandemic, research ethics, retractions
Summary of key points (include methodology)	Many papers have been published on the topic of COVID-19, number roughly 137 per day as of Februrary 2020. However not all the research is sound, and the rates of retractions on the topic of COVID-19 surpasses the general rates of retractions in science. This research looks to warn against allowing this to continue, and to ever happen again.
Research Question/Problem/ Need	How do the rates of retractions for scientific journal articles deal with COVID-19 compare with the general rate?
Important Figures	Only Abstract available for viewing :(
Notes	“Searches of COVID-19-associated publications on PubMed and Retraction Watch Database indicate that the retraction record appearance rate for COVID-19-related research is also exceptionally high compared to other related research topics in viral epidemics/pandemics and surpasses the basal level of about 4 in 10,000 papers.” (Rates of retractions on the topic of COVID-19 surpass basal level)
Cited references to	Only Abstract available for viewing :(

follow up on	
Follow up Questions	Why are the rates of retraction so high on the topic of COVID-19?

Article #18 Notes: Trump wrong that hydroxychloroquine studies only gave drug to dying patients

Article notes should be on separate sheets

Source Title	Trump wrong that hydroxychloroquine studies only gave drug to dying patients
Source citation (APA Format)	Greenburg, J. (2020). PolitiFact - Trump wrong that hydroxychloroquine studies only gave drug to dying patients. @politifact. https://www.politifact.com/factchecks/2020/may/20/donald-trump/trump-wrong-hydroxychloroquine-studies-only-gave-d/
Original URL	https://www.politifact.com/factchecks/2020/may/20/donald-trump/trump-wrong-hydroxychloroquine-studies-only-gave-d/
Source type	Fact check article
Keywords	N/A
Summary of key points (include methodology)	President Trump has touted the promised effects of hydroxychloroquine as an effective treatment for COVID-19 even stating that he had begun to take it himself. He was supported by early studies with small sample sizes, but newer studies with larger sample sizes have been denounced by him. Newer studies have found no correlation between usage of hydroxychloroquine and survival rates from COVID-19. Ultimately, however all researchers mostly agree that more research is still needed.
Research Question/Problem/ Need	Was Trump correct in his claim that a study on the effects of hydroxychloroquine showing negatives was a “bad survey?”
Important Figures	N/A
Notes	“To be clear, the Food and Drug Administration cautions that hydroxychloroquine can hurt people. It increases the risk of an irregular heartbeat, which can lead to cardiac arrest.” “There have been three: the one on VA patients and two larger ones. They all reached the same conclusion that outcomes with hydroxychloroquine were the same as without it.”

	Early research on hydroxychloroquine may have looked promising at first glance, but careful reading would have led to the conclusion that the jury was still out on whether or not it was truly effective. However, Trump decided otherwise and personally decided to begin taking it.
Cited references to follow up on	
Follow up Questions	Were any of the studies relating to hydroxychloroquine eventually retracted?

Article #19 Notes: Leveraging media and health communication strategies to overcome the COVID-19 infodemic

Article notes should be on separate sheets

Source Title	Leveraging media and health communication strategies to overcome the COVID-19 infodemic
Source citation (APA Format)	Mheidly, N., & Fares, J. (2020). Leveraging media and health communication strategies to overcome the COVID-19 infodemic. Journal of Public Health Policy, 41(4), 410–420. https://doi.org/10.1057/s41271-020-00247-w
Original URL	https://link.springer.com/article/10.1057%2Fs41271-020-00247-w
Source type	Journal Article
Keywords	COVID-19 Pandemic Infodemic Communication Social media Science Peer review Infodemic Response Checklist
Summary of key points (include methodology)	The COVID-19 pandemic prompted lots of research to be published quickly as interest in the virus was high from all groups of people – scientists, laymen, and governments alike. However, this may have led to less accurate information disseminating as the peer review process was bypassed somewhat in preprints. As such, bodies of science took steps to limit the effect of the misinformation that may have been contained in these preprints. However, more must still be done and our “Infodemic Response Checklist” is proposed to fulfill the gaps in communicating accurate information quickly to the general public.
Research Question/Problem/ Need	How can the scientific community better manage infodemics such as the one created by COVID-19?

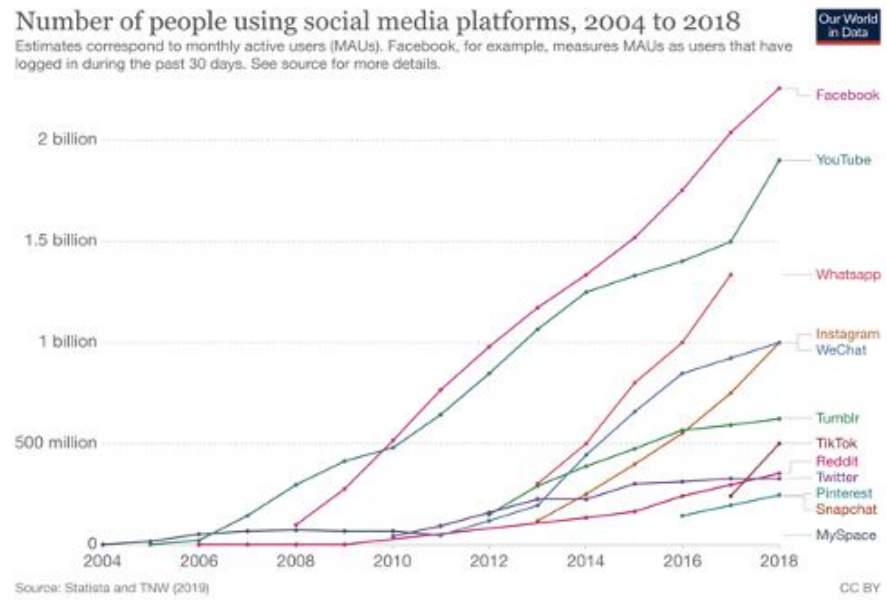
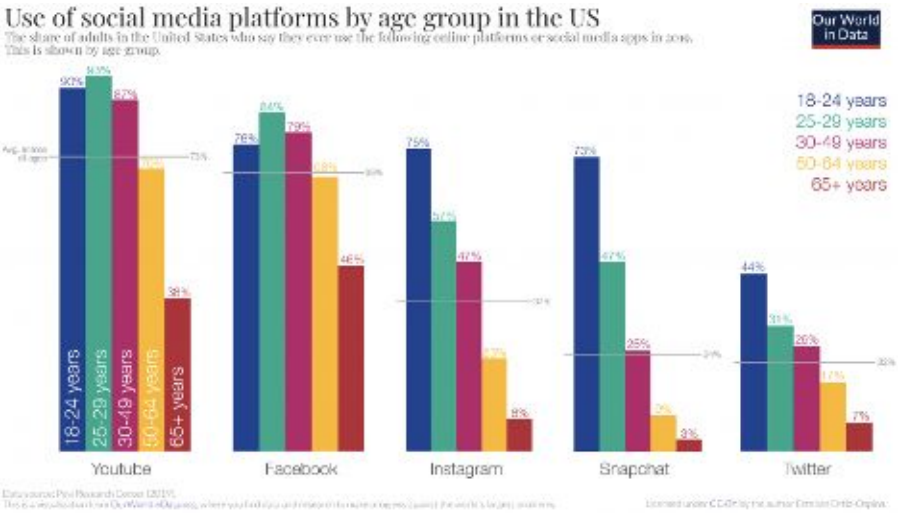
Important Figures	
Notes	"Media, in various forms, becomes the primary source of information." (Including social media?) "In 2018, Heidi Larson predicted that the impact of the next major outbreak would be magnified by emotional contagion that would be digitally enabled [3]." "She based her prediction on epidemiological studies showing that confidence in vaccines decreased between 2015 and 2018 [4, 5]." (Impact of misinformation?) "an analysis of Chinese newspapers, social media content, and other digital platform data, found that a unique combination of strong governance, strict regulation, strong community vigilance and citizen participation, and wise use of big data and digital technologies were key factors in China's efforts to combat this virus [10]." "In the age of social media dominance, monitoring all published posts related to the pandemic poses a difficult challenge. The phenomenon of spreading misinformation during outbreaks has been known to occur since the Middle Ages [13]." "The Director-General of the WHO called the phenomenon an 'infodemic.' " "The WHO later made an announcement that it would be working closely with social media platforms and search engine companies like Facebook, Google, Pinterest, Tencent, Twitter, TikTok, YouTube, among others, to deter the spread of rumors and misinformation." "Misleading scientific data can worsen the pandemic by promoting ineffective or harmful policies or by encouraging dangerous conduct, or both. In comparison with previous pandemics, researchers and health professionals published much more about COVID-19 in the early phase of the academic response than during the 2003 SARS outbreak [21]. Preprints gained increased popularity. Researchers promptly posted their findings online without peer review or editorial validation, using servers such as bioRxiv and medRxiv. Several preprints shared quickly and widely on social media then appeared on live broadcasts by news outlets." (Attempts to assure correct information comes from the scientific community does not work if the scientific community is the one that contains the misinformation) "Journals arranged for speeding peer review ('fast-tracking') to

	support prompt public health policymaking and benefit healthcare workers and the public with new discoveries and clinical trial results." "While speed is the enemy of rigorous science, the perfect scenario for facing an infodemic involves disseminating evidence-based and reliable information swiftly and widely among the public."
Cited references to follow up on	Claims that drinking hot water, snake oil, or silver, and burning incense leaves would cure coronavirus became popular [15]. Anti-vaccine movements exploited the outbreak, using social media accounts opposing vaccines to lure a surge in views and followers [19]. A content analysis of Twitter usage by Group of Seven (G7) world leaders in response to COVID-19 revealed that 82.8% of their COVID-19-related tweets were informative, 9.4% were morale-boosting, and 6.9% were political [30]. (Interesting content analysis?)
Follow up Questions	What exactly is content analysis? Can it be automated somewhat?

Article #20 Notes: The rise of social media

Article notes should be on separate sheets

Source Title	The rise of social media
Source citation (APA Format)	Ospina, E.O. (2019). The rise of social media. Our World in Data. Retrieved November 15, 2020, from https://ourworldindata.org/rise-of-social-media
Original URL	https://ourworldindata.org/rise-of-social-media
Source type	Our World In Data Article
Keywords	N/A
Summary of key points (include methodology)	The number of users on social media platforms number the billions — numbers that are truly significant considering the world population of 7 billion. Dominant social media platforms rise fast whilst others fall to the wayside. The giants of the modern age include Facebook, Youtube, and Whatsapp, though even lesser ones such as Tik Tok have roughly 500 millions users. Different social media platforms also attract different demographics of users; age and gender are some easy examples to point at. The vast increase in social media usage is most pronounced in richer countries and also has led to

	increased time spent online — being especially true for younger generations.
Research Question/Problem/ Need	How much is the prevalence of social media increasing in the modern day?
Important Figures	 
Notes	“These numbers are huge – there are 7.7 billion people in the world, with at least 3.5 billion of us online.” “The data also shows rapid changes in the opposite direction. Once-dominant platforms have disappeared. In 2008, Hi5, MySpace and Friendster were close competitors to Facebook, yet by 2012 they had virtually no share of the market.”

	"In general, young people are more likely to use social media than older people. But some platforms are much more popular among younger people. This is shown in the chart where we plot the breakdown of social media use by age groups in the US." (Increased prevalence in coming years) "Young people tend to use social media more frequently. In fact, in rich countries, where access to the internet is nearly universal, the vast majority of young adults use it." (Social media used by younger generations in richer countries, like America) "The rise of social media is an extraordinary example of how quickly and drastically social behaviours can change: Something that is today part of the everyday life of one-third of the world population, was unthinkable less than a generation ago." (just interesting)
Cited references to follow up on	"If today's young adults continue using social media throughout their life, then it's likely that social media will continue growing rapidly as internet adoption expands throughout lower-income countries." https://ourworldindata.org/internet#growth-of-the-internet
Follow up Questions	Has increased social media usage led to increased misinformation spread?