Algar, J. (2015, May 05). IBM's Watson Supercomputer to help doctors choose best cancer therapies. Retrieved from <http://www.techtimes.com/articles/50948/20150505/ibms-watson-supercomputer-to-help-doctors-choose-best-cancer-therapies.htm>

IBM has created a supercomputer, known as Watson, which has powerful cognitive computing capabilities. 14 U.S cancer treatment centers have partnered with IBM and Watson to develop personalized treatment plans for cancer patients from the genetic fingerprint of their cancer. Selecting the best treatment for a cancer patient can take weeks for a human to do, but because Watson has quick and easy access to scientific databases, he is able to these tasks in minutes. While this technology will be a huge benefit to the medical field, these centers will have to pay a fee that the vice president of IBM declines to disclose. This article definitely supports the use of AI in the medical field, as it discusses how Watson is able to use its computing power to do tasks in minutes. The author makes a criticism toward the ability of human doctors to complete tasks such as this, because it takes weeks to finish. The AI technology is more advanced and capable of completing these tasks than the human is and the human will never be up to par. This article can be used to discuss the benefits of AI, as it is more advanced than the human brain, thus it can do more and in a shorter amount of time. AI is already a benefit in the medical field, so this shows that as AI becomes more advanced, it will have more output into society.

Berr, J. (2014, December 09). Why Amazon's drone delivery service is a long way away. Retrieved from http://www.cbsnews.com/news/why-amazons-drone-delivery-service-is-a-long-ways-away/

 Amazon presented a form of weak AI delivery, when it revealed “Amazon Prime Delivery”, which was its use of unmanned aerial vehicles (UAVs) or drones in delivery services. Amazon tested its use of drones in other countries, due to the Federal Aviation Administration’s (FAA) resistance of supporting the use of drones by companies. The FAA’s “one-size-fits all approach” in the regulation of drones, which includes that operators of the drone must be a licensed pilot, the operation of these drones is much different from. With a fear of job loss due to the use of drones instead of human delivery services, Paul Misener, Amazon's vice president of global public policy, has stated that it is Amazon’s “continued desire to also pursue fast-paced innovation in the United States, which would include the creation of high-quality jobs and significant investment in the local community." This article analyzes the issues with the use of drones, as well as policies that are holding Amazon back from using them. It is unbiased since it includes these multiple perspectives, as well as the citing of policies, such as that from the FAA. This article can be used to establish companies that are using AI currently, as well as potential halts in place. It can also establish that, while drones will replace jobs, they will also create others.

Bostrum, N. (2003). Ethical issues in advanced Artificial Intelligence. Retrieved from [www.nickbostrom.com/ethics/ai.html](http://www.nickbostrom.com/ethics/ai.html)

AI has the potential of being an issue to society, as AI has the potential to become more advanced than human intelligence. While AI is a program and can be altered, it has the potential of being equal to or greater than a human, not only in intelligence, but in "reproduction" rates. There is also no guarantee that their thinking will be human-like or have any kind of moral basis, making them unable to sympathize with events or cases. While their lack of morals and human-like thinking will lead to a lack of bias, it can also lead to other mistakes a human would not normally make, as their thinking is different. While AI technology is already on its way, the threats that is possess must be assessed before the technology is fully developed and presented to society. Nick Bostrum, the author of this piece, is a Swedish philosopher at the University of Oxford, who has written many books on the subject of AI. This article is very biased against the creation of AI, as it only presents a negative argument. Also, the word choice used in the article makes one wary of the use of AI, such as "full-blown super intelligence", which he then goes on to explain how this would be sudden and could lead to issues. Also, when analyzing other papers he has written, they are all against the advancement of AI, including his article "Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards", in which he discusses the dangers of AI and how it could lead to human extinction. He does discuss slightly the good things that could come of AI if it is kept completely under control and he presents solutions to the issues, such as keeping the motivations of the programs specific, which allows for more credibility, but it is easy to tell that he swings on the side against AI. This article can be used to discuss the potential dangers of AI and how it may not be the best way to advance in certain fields, since AI does not have the morals of people. It can also be used to discuss potential solutions for the issues that AI has.

Cellan-Jones, R. (2014, December 2). Stephen Hawking warns artificial intelligence could end mankind - BBC News. Retrieved from http://www.bbc.com/news/technology-30290540

 This article is about the different perspectives of AI. It focuses on Stephen Hawking’s belief that AI is dangerous for humans and could later pose a threat. Currently, AI has been beneficial to people, in medical research especially, but as AI becomes more advanced, it becomes more dangerous towards people. This article supports the use of weak AI, but it criticizes advancing AI any further, citing a credible source, Stephen Hawking, which establishes that this article is credible and good to use. While it does have bias in its criticisms, the article backs up its points with evidence and commentary from those who know about the subject. This article can be used to show various perspectives about the issue of AI, as well as analyze the potential dangers.

Cully, A., Clune, J., Tarapore, D., & Mouret, J. (2015). Robots that can adapt like animals. Nature, 521(7553), 503-507. doi:10.1038/nature14422

 There is also a robot able to adapt to its situation when it is injured, and it is known as the first self-healing robot. Animals and humans are able to adapt to their injuries, while robots are normally not able to, as “they are limited to their pre-specified self-sensing abilities” and are only able to aid themselves in anticipated, pre-programmed situations, and it is impractical to program every potential situation into one robot. This new robot has an “intelligent trial-and-error algorithm”, which allows it to adapt to the damage it receives without self-diagnosis or previously programmed plans. The robot is able to act in less than two minutes by taking a map of prior knowledge of the behaviors it can perform and using the trial-and-error algorithm to “behavior that compensates for the damage”, such as, when a robot was injured in five different ways, with damaged and missing legs and its arm broken in fourteen different ways, it was able to adapt to the injuries in a quick and effective manner. This does not hold any bias, as it is a scientific journal presenting a discovery in technology. As well, it was written by the researchers on the subject and each of the authors has background in AI. This can be used to show the advancement of AI and how AI is coming closer to having evolutionary intelligence, like that of a human.

EPIC. (2015, February 26). EPIC - EPIC files lawsuit for details about government "pre-crime" program. Retrieved from <https://epic.org/2015/02/epic-files-lawsuit-for-details-3.html>

 Recently, Electronic Privacy Information Center (EPIC) has filed a lawsuit against the FBI, who was using weak AI in the form of secret algorithms to “to identify individuals who will commit crimes in the future”. The FBI has also been using cell phone tracking technology to track the location of communication devices, such as cell phones. These cell-site simulators “act like a fake cell towers and can be used to monitor and track cell phone users even when the device is not in use”, even if they aren’t the suspect in an investigation. This was posted by EPIC on their webpage, so it only shows the point of view of EPIC, not the FBI, making it bias, as there isn’t a point of view from both sides. It is still credible, as it can be used to show their point of view of the case. The decision of this case will help to establish more case law on whether AI technology is constitutional when used by the government.

Mercer, B. (2015, May 11). Could robotic grape surgery be the tipping point for robo buses, robo security guards, even robo news articles? Retrieved from <http://sanfrancisco.cbslocal.com/2015/05/11/robot-grape-tipping-point-robo-buses-robo-security-guards-even-robo-news-articles-futurist/>

In 2010, technology to create a robot with the ability to sew wounds for medical treatments was in the works. Recently, a robot has had the ability to sew very small object. In a video released, a robot carefully picked up the grape and performed a "surgery" on it, sewing the grape's skin back on with what is described as "amazing dexterity". This is not the only new technology on the rise, either, many more robots and software bots are doing many tasks like this, such as Google's driverless cars, which have the intelligence to avoid pedestrians and follow traffic laws down complex roads, security cameras able to determine threats within an image, and even robotic security guards in Silicon Valley businesses. While this article presents good examples for the advancements of AI technologies, the article has an undertone of a bias against the development. The author questions whether they will soon be replaced by technology, sarcastically reporting that "this article was written by a flesh-and-blood...human..", but other journalist companies are beginning to use software to report earthquakes, homicides, and crime. This article will be used to present examples of AI technology already in place and how it is a benefit to society, but can also be used to show how it can be a potential hazard, due to loss of jobs. Is it ethical to have people lose their jobs to a robot, who can't benefit from having the job, but the human can?

Henderson, B. (2014, September 14). The Legal Whiteboard. Retrieved from <http://lawprofessors.typepad.com/legalwhiteboard/2014/09/artificial-intelligence-and-the-law.html>

 A group of lawyers from Plexus Law Firm, based in Australia, released an AI system in 2014, which they coded themselves, that tells whether an advertisement is in compliance with the law. A task that would usually take around four to six weeks has been reduced to around ten minutes, at a cost reduction of twenty to thirty percent. This article is credible, as it presents the facts of the Plexus Law Firm and doesn’t really take a point of view on it. This article can be used to not only show the development of AI, but also to show how AI can affect the law and the lives of citizens. It can be used to consider whether using AI in the real world is a good idea, due to jobs being taken from people.

Moore’s law. (2010). In Encyclopædia Britannica. Retrieved from Encyclopædia Britannica Online: <http://www.britannica.com/EBchecked/topic/705881/Moores-law>

Moore’s law is written by an American engineer, Gordon Moore, in 1965. It was a prediction based on the number of transistors per silicon chips, also known as the processing power. His law states that this number double every year, estimating, in example, that the number of circuits in 1975 would be around 65,000 components per chips. While he did change this number to two years after a slowing rate occurred, his original number of one year was closer, as the number doubles around every 18 months. This law is good to use, as it is a proven and factual law presented by an engineer and has held true for over fifty years. Many people in the technology field accept this law. It can be used in my paper because it shows the growth of technology over time and though we may not have AI fully ready now, it is in the distant future. With machines that can sew a grape, cars that drive themselves, and so on, this law states that this technology’s processing power is doubling approximately every year.

Poole, D., & Mackworth, A. (2010). Social and ethical consequences. Retrieved from <http://artint.info/html/ArtInt_344.html>

AI is the next step in the development of technology, but if these have the ability to act on their own at some point, which is the wanted progress, they could get out of control, but they could also be a benefit to society, such as in health care. The question is whether using these robots and other AI technology is a good idea, as one has to wonder if they can be trusted to act in a correct manner. If they are unable to think on their own and must be programmed, they will not be able to make appropriate decisions in some cases, but if they can think on their own and process information in their own way, they could choose differently from what society needs. The ethics of many perspectives of those involved is also analyzed, including how humans should treat the robots if they are one day able to think independently. This examines both sides of the issue of AI, as it analyzes both the positive and negative consequences. The article evaluates not only the ethics of the robots themselves, but also the ethics of how humans should treat them, showing multiple perspectives of those involved. Both Alan Mackworth and David Poole are professors in the UBC Department of Computer Science and Alan Mackworth is on the Canada Research Chair in Artificial Intelligence, giving both of them background in this field. This article will be used to identify multiple perspectives of the issue of whether AI is a safe way to go in certain fields and if the AI technology can truly benefit society. Since the article analyzes multiple perspectives, the article can be used for both the negative and positive consequences. The article can also serve as a basis for the ethical issues involved in the development and use of AI.

Selman, B., Brooks, R. A., Dean, T., Horvitz, E., Mitchell, T. M., & Nilson, N. J. (1996). Proceedings of the Thirteenth National Conference on Artificial Intelligence and the Eighth Innovative Applications of Artificial Intelligence conference (pp. 1340-1345). Menlo Park, CA: AAAI Press.

This book selection (pages 1340-1345) outlines the issues that have arisen from the recent development in AI, as well as solutions that may be able to work. AI does not have the ability to think like a human, as they can’t adapt to a situation or event, like that of a human. They do not have an evolutionary thought process that allows them to adapt, meaning they would need to be programmed to do such and, if they are programmed to do that, the issues of whether they would need to be often reprogrammed in a factory must be considered. At this point, AI is not able to make decisions on its own and must be programmed to think the way that it does, so instead of logically thinking through a situation, they use a brute-force tactic, which is exactly what happened when Deep Blue played chess against a master chess player. This book is credible, as it is an analysis of AI by people within the field of technology and AI research. It is also credible, as all of the authors have background in technology and Artificial Intelligence. As well, while they are presenting potential and already established complications of AI, they also consider solutions that have already been attempted and solutions that can be used in the future. This book will help to establish whether AI can have the potential to make decisions using a human-like thought processing and whether or not AI can be used in society, since various companies are planning to use AI in areas such as the medical field, legal field, social networking, etc. As well, whether AI should be able to have rights in society based on their contributions would also be based on their ability to be human-like.

Stanford. (2004-2005). AI - ethical issues. Retrieved from <http://cs.stanford.edu/people/eroberts/courses/soco/projects/2004-05/ai/ai-ethics.html>

While at present, AI technology is not as advanced as it will be, there are a number of the issues that AI will have in the future. AI does have many potential benefits to humans, as the human brain is finite, meaning it can only take a small amount of information in short bursts, which is why people must go to school for so long; however, AI technologies can be programmed quickly with this information. This will essentially allow robots to take the places of humans in certain job forces, which can also present a problem due to lack of jobs available for people, as well as a consideration for the rights of robots and whether they should have them. Isaac Asimov is one person who studied this issue and came up with the Three Laws of Robotics, (1. A robot may not injure a human being or, through inaction, allow a human being to come to harm; 2. A robot must obey orders given it by human beings except where such orders would conflict with the First Law; 3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law. This article examines the ethical issue of using AI for the potential human gain, which can be ethically wrong to the robot or the human, depending on what aspect of the situation you are examining. By looking at each side of the issue, he is eliminating bias, yet he also does seem to lean on the side of humans, as he states that he is not sure if the existence of AI will be “desirable”, which he has define as being useful to humans. This puts a distance between the author and the ethical consideration to the robots, so this article will not be as good to use in defending the ethical rights of AI. In spite of this, the article can be used to establish the potential benefits to humans, as well as the ethical rights and wrongs that can affect humans and society as a whole.

Sunstein, C. R. (2001). Of Artificial Intelligence and legal reasoning. Chicago. Retrieved from <http://egov.ufsc.br/portal/sites/default/files/anexos/3753-3747-1-PB.pdf>

According to this essay, computers, and other AI technology, do not have the ability to think logically, since they cannot separate cases or link cases. According to this paper, at present, AI only has the ability to provide research assistance, not reason on its own. Since they do not have the ability to think on their own, AI technology does not have the capabilities to make legal decisions in the court of law, which is the field this paper surrounds. Currently, AI technology can only find analogous cases and can only present potential arguments to lawyers from existing case law; it cannot make a decision based on the specific facts of the case unless they are similar to others. This will become a problem when AI technology attempts to process new information that doesn’t have a precedent. Cass Sunstein is a legal scholar and a Professor of Law at Harvard Law School, which establishes credibility, since he does know the law. This article is biased, establishing that she believes that AI does not have the ability to analyze and think logically, making it more of a research partner than researcher, in the first sentence. However, she does establish that this paper is a criticism on the current technology, not its abilities projected in the future. She also presents both the “strong and weak” sides of AI reasoning in legal cases, yet she outright says she prefers the “weak” side. This essay can be used to establish that AI is not able to make decisions on its own, but can only make decisions based on previous information. This makes it a bad option for certain fields, like the legal field, because it doesn’t yet have the skill to think critically.

Weaver, J. F. (2014, February 3). What a Supreme Court case means for Google's and Facebook's use of Artificial Intelligence. Retrieved from <http://www.slate.com/blogs/future_tense/2014/02/03/deepmind_google_ai_ethics_board_what_u_s_v_jones_means_for_tech_companies.html>

This article is about the Supreme Court case, United States v. Jones, in which the court considered whether police needed a warrant to attach a GPS tracker to a suspect’s car and record his movements. The court decided that the police did, in fact, need a warrant and this court case can be used to question the validity of the use of artificial intelligence (AI) by companies- Google and Facebook- to monitor and track the public’s internet use. Companies have been using lower levels of AI for; however, with a rise in the capability of AI, the decision of whether limits should be placed should be greatly considered. The article poses arguments from both sides of the spectrum: that companies should be allowed to use AI, and they even already have been using it, yet they should also be restricted in what they are able to do. The article does seem to lean more toward the side of restricting use of AI, using example quotes, such as “human extinction will probably occur, and technology will likely play a part in this.”, which was said by the co-founder of DeepMind, an AI technology company. This source debates the ethics of privacy in using AI for big companies that play a large part in people’s daily lives. I can use this information, presented from both sides, to discuss the privacy issues that AI presents, as well as the legal struggles that will be faced by companies advancing in AI. I can use this article to establish that there is a Supreme Court case already decided that can argue limitations to be placed on AI.

Williams, S. (2002). Introduction. In Arguing A.I.: The battle for twenty-first century science (pp. 1-7). New York: At Random.

AI technology is a rising issue that must be debated. The technology is an evolution that can be compared to that of the evolution of human intelligence and while scientists agree that the technology has the capability of being faster, more powerful, self-driven, and self-optimizing, it is whether this is a benefit to society that is being questioned. This could lead to a society where machines know everything about humans and the world around, while humans know nothing about the machines and are unable to control them, yet others agree that machines being able to think for themselves could lead to a technological manifest destiny. The author analyzed both sides of the issue, citing many people for both the positive and negative consequences. He cites Hofstadter as a scientist who criticizes the emergence of AI technology, who calls the "current trend" of defending the use of AI "troubling" and states that there is a "casual disregard for the monumental difficulties" that come along with machine intelligence. Directly after, he cites three authors who are defending the rise in AI. While he presents both, he does seem to lean more with the positive side, but not enough that it affects his argument over all. This book has many arguments presented from both sides of the AI debate. It analyzes the fear that AI will lead to complications for society, as machines will outsmart humans and not be a benefit, but a disaster. There is also an argument presented in this book about why the development of artificial intelligence will, in fact, be a benefit to society.