

Autonomous Vehicles Literature Review

Companies like Google and Tesla are currently leading the way in the creation and implementation of the next generation of vehicles. Autonomous vehicles have the ability to vastly improve the ways in which roadways function today. However, the obstacles of this technology also need to be addressed in order to determine whether or not the technology is viable. In order to accomplish this, there are three major articles that I will examine. The first is written by five engineers from Google, Samsung, Yahoo and Altera. The article itself references multiple sources and describes the origin of autonomous technology and how it is developing. The second source is published in the MIT Technology Review and details various difficulties that self-driving cars will have to face before becoming available to the public. The final source goes into depth on the risks that all drivers face and how computers should act when given an ethical choice. The article is published in IEEE Spectrum and is written by Noah Goodall, a research scientist at the Virginia Transportation Research Council. These articles represent the major points that I want to discuss in my research paper and should therefore be from relevant and trustworthy sources.

The first article, titled “Self-Driving Cars: Disruptive or Incremental,” is the most content rich document and the one which will be most closely related to my research paper. It was written by several professionals at various large software companies. Tao Jiang graduated from Stanford and is now a quantitative analyst at Google. Srdjan Petrovic is also at Google as a software engineer and has a PhD in computer science from Dartmouth College. With extensive hardware, software and mobile experience, Uma Ayyer is a technology and business development leader at Samsung. Anand Tolani is another professional in computer science and works for Yahoo! Inc. Finally, Sajid Husain appears to be the most experienced of all of the researchers and has worked for multiple companies including IBM and Altera and is currently employed as a senior engineering professional at Intel. The combination of all of this experience and seniority means that the authors know a lot about the topic they are discussing. Additionally, the article is published by the Center for Entrepreneurship and Technology at the University of California in Berkeley. It is published in the Applied Innovation Review which is intended to be used to identify trends and practices that could affect the global economy.[1] Therefore, along with the information about autonomous cars themselves, the article also contains information on the current market for cars and the expectations for the market of self-driving cars. For this information, Jiang and Ayyer are essential in order to analyze current data and predict future trends. The article tends to be slightly biased for autonomous cars but it also identifies some of the negatives of the technology and the hurdles that it will face. Additionally, the article adequately cites where it acquired its material from and appears to be a very credible source.

In contrast to the optimistic view of the previous article, Lee Gomes seems to think that autonomous cars are further away than what people expect, as he explains in his article "Hidden Obstacles for Google's Self-Driving Cars". The article was published in the MIT Technology Review and, according to MIT, "Accuracy and independence are our highest priorities: our coverage is independent of any influence, including our ownership by MIT." [2] Lee Gomes is not a professional in the field, but rather he is a freelance technology writer who has written previously for Forbes and the Wall Street Journal. Despite his lack of schooling in engineering, the article is not necessarily unreliable. He writes in a much more informal way than the previous article, but he highlights a few important ideas and does a good job of citing his sources along the way. Furthermore, the MIT Technology Review is a reputable source and it ensures that the content is correct. Therefore, just because the author doesn't have a degree in engineering, I believe this article to be a credible source for my research.

The final article is written regarding the ethical concerns of autonomous cars and is appropriately titled "Can You Program Ethics into a Self-Driving Car?" It is written by Noah Goodall, a research scientist at the Virginia Transportation Research Council, in Charlottesville, Va and is published in IEEE Spectrum. IEEE is highly regarded as a respectable and credible source for multiple reasons. First, it is peer reviewed to ensure that the articles submitted to IEEE and published by IEEE are of high quality before accepting them for publication. [3] It is this consistency that puts IEEE publications under high demand for researchers and corporations. This specific article is just one of many publications that Goodall has written on the topic of self-driving cars, most of which have focused on the ethics of the technology. Due to his experience in writing similar publications and the fact that it is published by IEEE, I believe that this article will be an important part of my research paper.

With the exception of one, all of the authors of these articles have graduated from accredited universities with a degree which is relevant to what they are writing about. Furthermore all of the articles have been published in reliable journals and websites. For these reasons, I believe that these are credible sources that will be very valuable to the research and writing of my paper. They also all present different views on autonomous cars, all of which will be useful in determining the future viability of the technology.

References

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