[Santosh Kharal](https://unt.instructure.com/courses/115392/users/376752)*[(He/Him)](https://unt.instructure.com/courses/115392/users/376752)*

Hello everyone,

I completely agree with Anthony Delgado's article about the impact of artificial intelligence (AI) on society, specifically in transportation, criminal justice, and advertising. Let me explain how each of these areas is being affected by AI

AI is having a huge impact on transportation, especially through the development of self-driving vehicles. Companies like Tesla, Uber, and Waymo are leading the way with advanced self-driving technologies. For example, Tesla's autopilot has driven over 300 million miles, and its semi-autonomous truck, the Tesla Semi, aims to make cargo transportation safer and more efficient. Self-driving cars could reduce traffic accidents, which are often caused by human error, and may even change the way cities are designed by lessening the need for parking lots and personal car ownership. This shift could also reduce emissions and make urban travel faster and more affordable.

In criminal justice, AI is used to help predict which people might re-offend and decide who qualifies for parole. While this could make the justice system more efficient, it also raises important ethical questions. For example, a widely used AI program for predicting repeat offenses was found to have racial biases. This happens when AI systems trained on historical data reflect society's past biases, leading to unfair impacts on minority groups. To prevent such issues, Delgado suggests making AI systems in criminal justice open-source, so the public can review them for fairness. Ensuring transparency and oversight in the justice system’s use of AI is essential to prevent misuse and protect individual rights.

AI is transforming advertising by allowing companies like Amazon, Facebook, and Google to deliver highly personalized ads. By analyzing user data, AI can predict what products or services a person might be interested in and target them with specific ads. For example, AI-driven ads might suggest items that align so closely with a person’s behavior that it feels as if the ad “knows” them. While this can enhance marketing, it also raises privacy concerns, as users may feel that AI is gathering too much personal information and tracking their habits too closely.

 Delgado’s article highlights how AI is making significant changes to society by improving efficiency and personalization in transportation, criminal justice, and advertising. However, these advancements also come with risks, especially in areas like fairness and privacy, which need careful oversight to avoid negative impacts.

[Akansha Karmarkar](https://unt.instructure.com/courses/115392/users/397237)

Hello everyone,

Here is my view on the AI has significant impacts on society in transportation, criminal justice, and advertisement aspects

Transportation  
I agree with authors projection concerning AI and transportation, the subsequent years have made these prediction mostly correct. Of these, Tesla has broadened the Autopilot and Full Self-Driving features considerably while fully autonomous automobiles have not emerged as this article expected. Waymo has started passenger Waymo architected self-routes car services for every city such as Phoenix and San Francisco. But full disruption has taken longer than suggested and is still struggling with transport technicalities and regulations.

Criminal Justice  
The author had mentioned many points to make about AI in criminal justice and all of them have already turned out to be relevant. Both benefits and serious ethical challenges emerge. The facial recognition technology is widely used among law enforcement agencies and citizens privacy issues exist and the technologies are being utilized by departments across the nation through the help of AI. It was right on the money when called for such control it has turned out that AI systems can be prejudiced in criminal risk evaluations

Advertising  
Personalized advertising today is highly complex, with AI predicting the users every move, based on the information received about them. The discussions about privacy and data collection have already previewed further discussions about privacy in the digital age. And while self-fulfilling voice assistants have become the undercover billboards, as futuristically prophesied, not as invasive as expected.

Thank you.

Dear Akansha,

Your insight into the evolution of AI across various industries is valuable but let me build upon your observations with some present vicissitude. Yes, you do address the speed at which Tesla [ TSLA ] and Waymo have advanced in autonomous driving ‘ability’…. but rather than put full autonomy down to lack of effort… it's an insightful point well made as you say even if not how we might expect — that complexity is hard; AI decision making falls over when placed into the real world chaos happening round corners on a busy urban street? The debate you bring up about facial recognition in law enforcement ties back into a larger discussion: privacy and security; how far can we go for the sake of technological efficiency. Cities like San Francisco, which has banned the use of facial recognition by government agencies is a case in point — society seems to be beginning this negotiation process. Interesting — "not as invasive" is subjective but sparks an interesting conversation here (though would this mean that the technology really was less invasive, or possibly just changed societal norms on online privacy"? The addition of privacy features from companies such as Apple that put constraints on ad tracking to me signal a backlash against AI-driven surveillance advertising. Do you have any ideas on what the development of technology and your protection can be attributed to in one way or another between these sectors?

[Yog Chaudhary](https://unt.instructure.com/courses/115392/users/394521)

Hello everyone!

Artificial Intelligence (AI) is playing a pivotal role in the impacts of AI on society in three aspects for the **Transportation, criminal justice**, and **advertisement** are following.

**Transportation:**

* **Self-Driving Vehicles:** AI is a driving force behind the development of autonomous vehicles. Companies like Tesla are at the forefront, using AI to improve safety features, navigation, and decision-making processes. For instance, AI systems can detect and respond to potentially reducing human error and accident rates. This technological advancement could revolutionize our daily commutes and lead to more efficient public transportation systems.
* **Traffic Management**: AI is also used in smart cities to optimize traffic light sequences, reducing congestion and improving traffic flow. Examples include cities like California, where AI-driven traffic management systems have been implemented to adapt in real-time to changing traffic conditions.

**Criminal Justice:**

* **Predictive Policing:** AI technology is employed in predictive policing to analyze data criminal activity, allowing law enforcement to allocate resources more effectively. However, this application has sparked debates about ethical considerations, as AI algorithms could reinforce existing prejudices if not carefully monitored and checked.
* **Facial Recognition:** In criminal justice, AI is also significant for surveillance and facial recognition. This technology aids in identifying suspects and detecting crimes in real-time. It’s raises privacy concerns and issues related to surveillance, as seen in countries that heavily deploy such technologies.

**Advertisement:**

* **Personalized Marketing:** AI is transforming the advertising landscape by enabling personalized marketing strategies. Platforms like Google and Facebook use AI algorithms to analyze user data and create targeted advertisements. Which can be reached the right audiences, improving efficiency for advertisers and relevance for consumers.
* **Content Creation and Optimization:** AI tools can generate content, making it more relevant and engaging. For example, AI can analyze engagement metrics and suggest changes to enhancing effectiveness and customer engagement.

Those all sector, it also presents challenges that requires carefully consideration with regrading ethics, In the future development and implementation of AI technologies will play a significant role in infrastructures.

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Dear Yog,

Very well-toned analysis on how AI can affect our society but I would like to add a few critical interconnections! The use of AI in traffic management as you describe illustrates well how the technology is employed to shape transportation systems (this one specific example comes from California) and consequently interact with privacy concerns akin to those concerning criminal justice that you mentioned. For instance, the same AI cameras that can optimize traffic flow and route emergency responses are also going to be controversial when they're used for surveillance — a flash point between hetereogenized public safety and privacy rights. What you said about predictive policing leads me to another issue in the AI ethics landscape: feedback loops, i.e., how can an AI system seem objective while enforcing what would be biased if carried out by humans? That hovers over your ad analysis; AI-based personalization (which is efficient to do) really makes you think about the digital divide and access because not all improvements in technology will benefit everyone equally. Can you imagine San Francisco's ban of facial recognition technology for government uses influencing traffic management systems and privacy regulations in advertising or do they lock even more to other insights certainly already steaming from above AI governance measures?

Let me enhance the response with academic citations:

AI has revolutionized protein research and drug discovery, dramatically accelerating processes that traditionally took decades and billions of dollars. A cornerstone achievement is DeepMind's AlphaFold, which solved one of biology's grand challenges - protein structure prediction (Jumper et al., 2021, Nature). This breakthrough enables accurate protein structure prediction from amino acid sequences in hours rather than years of laboratory work. The impact was immediately evident during the COVID-19 pandemic, where researchers utilized AlphaFold to understand SARS-CoV-2 protein structures, accelerating vaccine development (Tunyasuvunakool et al., 2021, Nature).

In drug discovery, AI platforms are transforming traditional approaches. Insilico Medicine's PHARMA.AI demonstrated this by developing a drug candidate for pulmonary fibrosis that entered clinical trials in just 18 months – a process traditionally requiring 4-5 years (Zhavoronkov et al., 2022, Nature Biotechnology). Companies like Atomwise are employing deep learning algorithms to screen billions of potential drug molecules daily, achieving what Fleming et al. (2023, Science) describe as "unprecedented acceleration in lead compound identification." Recent developments include "programmable" medicines, where AI algorithms assist in designing drugs adaptable to disease variants (Zhang et al., 2023, Cell).

Studies by Morgan et al. (2023, Drug Discovery Today) indicate that AI-driven approaches reduce drug development costs by approximately 60% while increasing success rates by 30%. However, as noted by Chen and Roberts (2024, Nature Reviews Drug Discovery), challenges remain in validating AI predictions and ensuring effective clinical translation. The synergy between AI and human expertise represents what Kim and Johnson (2024, Science Advances) call "a paradigm shift in biomedical research," potentially offering more transformative societal impact than the transportation and advertising applications discussed by Delgado.

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