How is artificial intelligence transforming the transportation industry?

Artificial intelligence (AI) is a mechanism for integrating, interpreting, and utilizing the results of data to create a decision making system for an array of industries. One industry in particular that has been highly visible in AI advancements is transportation.

The genesis of AI may be summarized as a system that learns information and then incorporates it as input into making critical decisions, such as vehicle navigation. In semi-autonomous driving, vehicles can signal drivers of road conditions such as traffic, construction, and weather conditions. Custom built algorithms work in conjunction with vehicle sensors and cameras to provide safer transportation to the driver. For example, if a driver veers the vehicle outside its current driving lane, this would trigger a sensor and automatically steer the car back to its original lane.

An even more advanced system is fully autonomous driving, where the vehicle uses innovative systems to provide *complete* control for all navigable operations, free of any driver assistance. Autonomous systems include several advanced specifications such as vehicle guidance, lane changing guidance, and braking. Cameras and sensors are used in conjunction with real time driving data to avoid accidents.

The primary means for vehicle navigation and accident avoidance is through the use of light detection and ranging systems, or LIDAR. Laser technology is used to gauge distances through measuring the delay times of the pulse and detected signal.

A key idea of AI in semi or fully autonomous transportation is that the actual AI software and data is the driving force behind the driving decisions. By learning from past experiences and other vehicles, AI allows vehicles to operate more safely and smarter.

Despite the recent AI advancements in transportation, setbacks like the March 2018 incident where an Uber car operating autonomously hitting and killing a pedestrian are a significant blow to AI. Before autonomous vehicles can become more prevalent in everyday life, additional testing and advancements must be made to eliminate all probability of these types of accidents occurring again.

**References**

Buxbaum, Peter. “Artificial Intelligence: How it Could Transform Transportation.” *Global Trade,* 1 May. 2018, www.globaltrademag.com/software/artificial-intelligence-how-it-could-transform-transportation