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## **Machine Learning in Autonomous Vehicles**

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**Abstract:** The integration of machine learning in autonomous vehicles represents a paradigm shift in transportation technology, with the potential to redefine mobility and reshape urban landscapes. As self-driving cars continue to evolve, their societal impact becomes increasingly evident, spanning aspects such as reduced traffic congestion, improved fuel efficiency, and enhanced accessibility for individuals with limited mobility. Furthermore, the combination of machine learning with autonomous vehicles promises to pave the way for more sustainable and environmentally friendly transportation solutions. This paper aims to delve into the multifaceted relationship between machine learning and autonomous vehicles, exploring the advancements and challenges that lie ahead in this transformative journey towards safer, more efficient, and autonomous transportation systems.

**Keywords:** Autonomous Vehicles, Machine Learning, Artificial Intelligence, Self-driving Cars, Computer Vision, Sensor Fusion

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