1. Record Nr. UNINA9910876861403321

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Titolo	Artificial Intelligence for Autonomous Vehicles : The Future of Driverless Technology
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2024
ISBN	9781119847656 1119847656 9781119847649 1119847648
Edizione	[1st ed.]
Descrizione fisica	1 online resource (268 pages)
Collana	Advances in Data Engineering and Machine Learning Series
Altri autori (Persone)	SabharwalMunish HuYu-Chen BalusamyBalamurugan
Disciplina	629.2/046028563
Soggetti	Automated vehicles - Technological innovations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title Page -- Copyright Page -- Contents -- Preface -- Chapter 1 Artificial Intelligence in Autonomous Vehicles-A Survey of Trends and Challenges -- 1.1 Introduction -- 1.2 Research Trends of AI for AV -- 1.3 AV-Pipeline Activities -- 1.3.1 Vehicle Detection -- 1.3.2 Rear-End Collision Avoidance -- 1.3.3 Traffic Signal and Sign Recognition -- 1.3.4 Lane Detection and Tracking -- 1.3.5 Pedestrian Detection -- 1.4 Datasets in the Literature of Autonomous Vehicles -- 1.4.1 Stereo and 3D Reconstruction -- 1.4.2 Optical Flow -- 1.4.3 Recognition and Segmentation of Objects -- 1.4.4 Tracking Datasets -- 1.4.5 Datasets for Aerial Images -- 1.4.6 Sensor Synchronization Datasets -- 1.5 Current Industry Standards in AV -- 1.6 Challenges and Opportunities in AV -- 1.6.1 Cost -- 1.6.2 Security Concerns -- 1.6.3 Standards and Regulations -- 1.7 Conclusion -- References -- Chapter 2 Age of Computational AI for Autonomous Vehicles -- 2.1 Introduction -- 2.1.1 Autonomous Vehicles -- 2.1.2 AI in Autonomous Vehicles -- 2.1.2.1 Functioning of AI in Autonomous Vehicles -- 2.2 Autonomy -- 2.2.1 Autonomy Phases -- 2.2.2 Learning Methodologies

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Sommario/riassunto

With the advent of advanced technologies in AI, driverless vehicles have elevated curiosity among various sectors of society. The automotive industry is in a technological boom with autonomous vehicle concepts. Autonomous driving is one of the crucial application areas of Artificial Intelligence (AI). Autonomous vehicles are armed with sensors, radars, and cameras. This made driverless technology possible in many parts of the world. In short, our traditional vehicle driving may swing to driverless technology. Many researchers are trying to come out with novel AI algorithms that are capable of handling driverless technology. The current existing algorithms are not able to support and elevate the concept of autonomous vehicles. This addresses the necessity of novel methods and tools focused to design and develop frameworks for autonomous vehicles. There is a great demand for energy-efficient solutions for managing the data collected with the help of sensors. These operations are exclusively focused on non-traditional programming approaches and depend on machine learning techniques, which are part of AI. There are multiple issues that AI needs to resolve for us to achieve a reliable and safe driverless technology. The purpose of this book is to find effective solutions to make autonomous vehicles a reality, presenting their challenges and endeavors. The major contribution of this book is to provide a bundle of AI solutions for driverless technology that can offer a safe, clean, and more convenient riskless mode of transportation.