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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.