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Nota di contenuto	Cover -- Series Page -- Title Page -- Copyright Page -- Contents -- Preface -- Chapter 1 Computer Vision-Based Innovations for Smart Agriculture and Crop Surveillance: Evolution, Trends, and Future Challenges -- 1.1 Introduction -- 1.2 Artificial Intelligence in Agriculture -- 1.3 Evolution of Smart Agriculture -- 1.4 AI Technology Trends in Computer Vision -- 1.5 Benefits of Artificial Intelligence in Agriculture -- 1.5.1 Improving the Whole Supply Chain -- 1.5.2 Agricultural Robotics -- 1.5.3 Policy, Governance and Market Access -- 1.5.4 Early Warning System -- 1.5.5 Food Safety and Traceability -- 1.5.6 Financial Inclusion and Risk Management -- 1.5.7 Capacity Building and Empowerment -- 1.5.8 Growth Driven by IoT -- 1.5.9 Image-Dependent Insight Generation -- 1.5.10 Identification of Optimal Mix for Agronomic

Sommario/riassunto	This book is essential for anyone interested in understanding how smart agriculture, utilizing information and technology such as computer vision and deep learning, can revolutionize agriculture productivity, resolve ongoing concerns, and enhance economic and general effectiveness in farming. The need for a reliable food supply has driven the development of smart agriculture, which leverages technology to assist farmers, especially in remote areas. A key component is computer vision (CV) technology, which, combined with deep learning, can manage agricultural productivity and enhance automation systems for improved efficiency and cost-effectiveness. Automation in agriculture ensures benefits like reduced costs, high performance, and accuracy. Aerial imaging and high-throughput research enable effective crop monitoring and management. Computer vision and AI models aid in detecting plant health, impurities, and pests, supporting sustainable farming. This book explores using CV and AI to develop smart agriculture through deep learning, data mining, and intelligent applications.