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Sommario/riassunto	The book focuses on graph neural network methods and applications for scene understanding. Graph Neural Network is an important method for graph-structured data processing, which has strong capability of graph data learning and structural feature extraction. Scene understanding is one of the research focuses in computer vision and image processing, which realizes semantic segmentation and object recognition of image or video. In this book, the algorithm, system design and performance evaluation of scene understanding based on graph neural networks have been studied. First, the book elaborates the background and basic concepts of graph neural network and scene understanding, then introduces the operation mechanism and key methodological foundations of graph neural network. The book then comprehensively explores the implementation and architectural design of graph neural networks for scene understanding tasks, including scene parsing, human parsing, and video object segmentation. The aim of this book is to provide timely coverage of the latest advances and developments in graph neural networks and their

applications to scene understanding, particularly for readers interested in research and technological innovation in machine learning, graph neural networks and computer vision. Features of the book include self-supervised feature fusion based graph convolutional network is designed for scene parsing, structure-property based graph representation learning is developed for human parsing, dynamic graph convolutional network based on multi-label learning is designed for human parsing, and graph construction and graph neural network with transformer are proposed for video object segmentation.