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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	I. Theory -- Neurobiological Background -- Related Work -- Neural Abstraction Pyramid Architecture -- Unsupervised Learning -- Supervised Learning -- II. Applications -- Recognition of Meter Values -- Binarization of Matrix Codes -- Learning Iterative Image Reconstruction -- Face Localization -- Summary and Conclusions.
Sommario/riassunto	Human performance in visual perception by far exceeds the performance of contemporary computer vision systems. While humans are able to perceive their environment almost instantly and reliably under a wide range of conditions, computer vision systems work well only under controlled conditions in limited domains. This book sets out to reproduce the robustness and speed of human perception by

proposing a hierarchical neural network architecture for iterative image interpretation. The proposed architecture can be trained using unsupervised and supervised learning techniques. Applications of the proposed architecture are illustrated using small networks. Furthermore, several larger networks were trained to perform various nontrivial computer vision tasks.