

Criminisi, Antonio; Shotton, Jamie; Konukoglu, Ender

Decision forests: a unified framework for classification, regression, density estimation, manifold learning and semi-supervised learning. (English) Zbl 1243.68235

Found. Trends Comput. Graph. Vis. 7, No. 2-3, 81-227 (2011).

The book presents a decision forest framework that encompasses classification, regression, density estimation, manifold learning and semi-supervised learning under the same roof. A general core was first developed and the different types of learning can be further instantiated from that in application to various tasks, ranging from scene and object recognition, automated medical diagnosis and semantic text parsing.

Many types of readers can enjoy this very interesting and practical book: from the students willing to know the foundation of decision forests and researchers updating their knowledge with new contributions to the field to practitioners working in the applicative fields targeted by this book. It can even be fascinating just for gratifying one's curiosity as to how is it that Kinect works so nice for Xbox 360.

Reviewer: [Catalin Stoean \(Craiova\)](#)

MSC:

[68T05](#) Learning and adaptive systems in artificial intelligence

[68-02](#) Research exposition (monographs, survey articles) pertaining to computer science

[62H30](#) Classification and discrimination; cluster analysis (statistical aspects)

[62G07](#) Density estimation

Cited in **7** Documents

Keywords:

[decision forests](#); [machine learning](#); [computer vision](#); [classification](#); [regression](#); [density estimation](#); [manifold learning](#); [semi-supervised learning](#)

Software:

[SHOGUN](#); [SVMlight](#)

Full Text: [DOI](#)