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Advancement of Deep Learning and its Applications in Object Detection and Recognition

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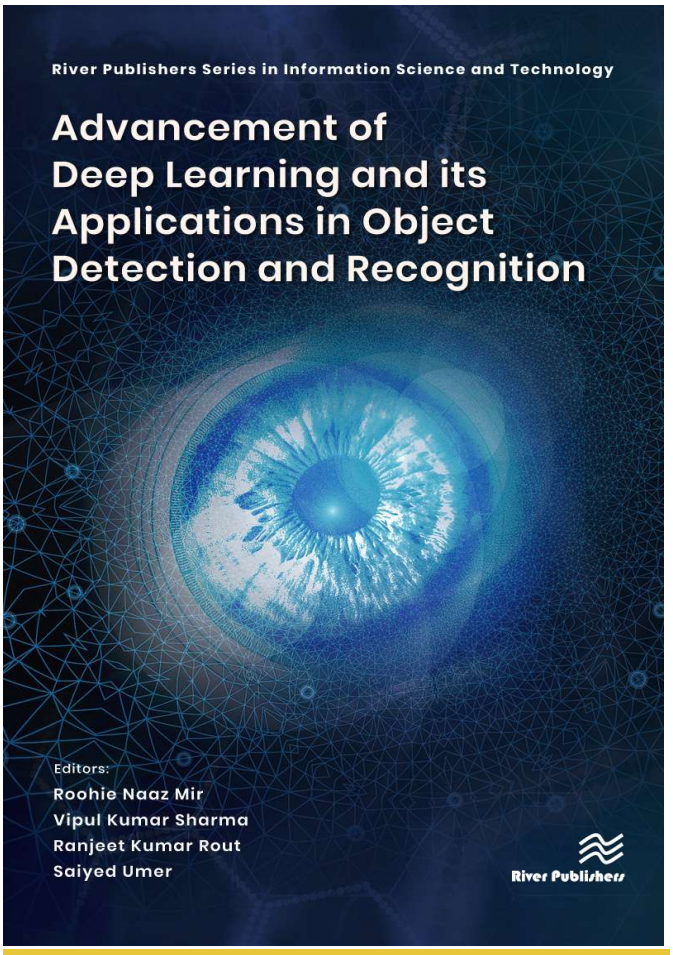
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Object detection is a basic visual identification problem in computer vision that has been explored extensively over the years. Visual object detection seeks to discover objects of specific target classes in a given image with pinpoint accuracy and apply a class label to each object instance. Object recognition strategies based on deep learning have been intensively investigated in recent years as a result of the remarkable success of deep learning-based image categorization.

In this book, we go through in detail detector architectures, feature learning, proposal generation, sampling strategies, and other issues that affect detection performance.

The book describes every newly proposed novel solution but skips through the fundamentals so that readers can see the field's cutting edge more rapidly. Moreover, unlike prior object detection publications, this project analyses deep learning-based object identification methods systematically and exhaustively, and also gives the most recent detection solutions and a collection of noteworthy research trends.

The book focuses primarily on step-by-step discussion, an extensive literature review, detailed analysis and discussion, and rigorous experimentation results. Furthermore, a practical approach is displayed and encouraged.



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