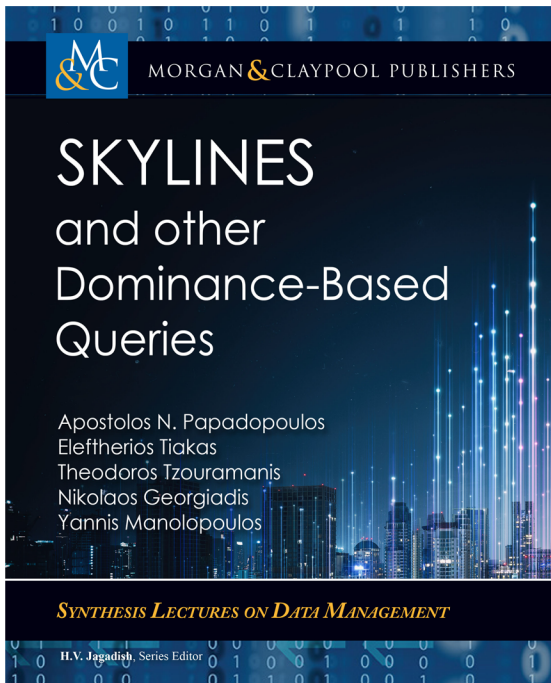▶ Exploring algorithms and applications related to dominance-based query processing, including fundamentals and advanced issues.

Skylines and Other Dominance-Based Queries

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This book is a gentle introduction to dominance-based query processing techniques and their applications. The book aims to present fundamental as well as some advanced issues in the area in a precise, but easy-to-follow, manner. Dominance is an intuitive concept that can be used in many different ways in diverse application domains. The concept of dominance is based on the values of the attributes of each object. An object p dominates another object q if p is *better* than q. This goodness criterion may differ from one user to another. However, all decisions boil down to the minimization or maximization of attribute values. In this book, we will explore algorithms and applications related to dominance-based query processing. The concept of dominance has a long history in finance and multi-criteria optimization. However, the introduction of the concept to the database community in 2001 inspired many researchers to contribute to the area. Therefore, many algorithmic techniques have been proposed for the efficient processing of dominance-based queries, such as skyline queries, k-dominant queries, and top-k dominating queries, just to name a few.

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