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A Model for Skyline Query Processing in a Partially Complete Database

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Abstract

In the recent years, skyline queries become one of the predominant and most frequently used queries among preference queries in the database system. Its main theme is to identify and return those data items that are not dominated by any other data item in the database. In the past decade, a tremendous number of researches have been conducted emphasized on skyline queries by proposing many variations of skyline techniques for different type of database. Most of these techniques claimed that a database has complete data and values are always present when process skyline queries. However, this is not necessary to be always the case, particularly for large databases with a high number of dimensions as some values may be missing. Thus, existing techniques cannot be easily tailored to derive skylines in a database with missing values. Two significant issues might be raised, the issue of losing transitivity property which thus lead to the issue of cyclic dominance. Finding skylines in a database with partially complete data has not received enough attention. This paper proposes an efficient model to identify skylines over a database with partial complete data. Experimental results on various types of datasets demonstrate that the proposed approach outperforms the previous approach in terms of the number of pairwise comparison.

Keywords

Author Keywords: Skyline; Skylines Queries; Query Processing; Incomplete Data; Preference Queries

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1. **A Simplex Nelder Mead Genetic Algorithm for Minimizing Molecular Potential Energy Function** **Times Cited: 3**
 By: Ali, Ahmed Fouad; Hassanien, Aboul-Ella
 APPLICATIONS OF INTELLIGENT OPTIMIZATION IN BIOLOGY AND MEDICINE: CURRENT TRENDS AND OPEN PROBLEMS Book Series: Intelligent Systems Reference Library Volume: 96 Pages: 1-21 Published: 2016
2. **Skyline sets queries for incomplete data** **Times Cited: 2**
 By: Arefin, M.S.; Morimoto, Y.
 International Journal of Computer Science & Information Technology Volume: 4 Issue: 5 Pages: 67-80 Published: Oct. 2012
3. **Salsa: Computing the skyline without scanning the whole sky** **Times Cited: 20**
 By: Bartolini, I; Ciaccia, P; Patella, M.
 CIKM Pages: 405-414 Published: 2006
 Publisher: ACM
4. **Finding skylines for incomplete data** **Times Cited: 10**
 By: Bharuka, R.; Kumar, P. S.
 P 24 AUSTR DAT C Volume: 137 Pages: 109-117 Published: 2013
5. **The Skyline operator** **Times Cited: 715**
 By: Borzsonyi, S; Kossmann, D; Stocker, K
 17TH INTERNATIONAL CONFERENCE ON DATA ENGINEERING, PROCEEDINGS Book Series: IEEE International Conference on Data Engineering Pages: 421-430 Published: 2001
6. **On high dimensional skylines** **Times Cited: 55**
 By: Chan, Chee-Yong; Jagadish, H. V.; Tan, Kian-Lee; et al.
 ADVANCES IN DATABASE TECHNOLOGY - EDBT 2006 Book Series: Lecture Notes in Computer Science Volume: 3896 Pages: 478-495 Published: 2006
7. **Skyline with presorting** **Times Cited: 262**
 By: Chomicki, J; Godfrey, P; Gryz, J; et al.
 19TH INTERNATIONAL CONFERENCE ON DATA ENGINEERING, PROCEEDINGS Book Series: PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON DATA ENGINEERING (SERIES) Pages: 717-719 Published: 2003
8. **Bitpeer: continuous subspace skyline computation with distributed bitmap indexes** **Times Cited: 7**
 By: Fotiadou, K.; Pitoura, E.
 P INT WORKSH DAT MAN Pages: 35-42 Published: 2008
9. **Maximal vector computation in large data sets** **Times Cited: 106**
 By: Godfrey, P.; Shipley, R.; Gryz, J.
 P 31 INT C VER LARG Pages: 229-240 Published: 2005
 Publisher: VLDB Endowment
10. **Skyline query processing for incomplete data** **Times Cited: 42**
 By: Khalefa, Mohamed E.; Mokbel, Mohamed F.; Levandoski, Justin J.
 2008 IEEE 24TH INTERNATIONAL CONFERENCE ON DATA ENGINEERING, VOLS 1-3 Book Series: IEEE International Conference on Data Engineering Pages: 556-565 Published: 2008
11. **Efficient progressive skyline computation** **Times Cited: 57**
 By: Kian-Lee Tan; Pin-Kwang Eng; Beng Chin Ooi
 Proceedings of the 27th International Conference on Very Large Data Bases Pages: 301-10 Published: 2001