Title of Paper: Observation on Database Research Trends via Publication Statistics

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Reviewer Team: Stuart Ness

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SUMMARY:

FOCUS:

Does the paper clearly identify the problem it is addressing?
The paper does not clearly identify the problem it is addressing. In order to understand the problem, the majority of the paper must be read before understanding that the problem is finding a faster method to find k-dominant skyline queries in preparation for continuous queries. Identify the problem within the first paragraph, so that the rest of the introduction makes sense for understanding what you are writing about.

Does the paper clearly explain related work and their limitations?
The paper does a fairly good job of doing a literature review and suggesting how the background work does not meet the future needs. More work could be done to show any other literature that has explored the k-queries, if any exists. Also, some background literature on the general skyline queries and possibly some applications of the skyline query would be beneficial in identifying how it has been used in real-world applications.

Does the paper identify its key contributions?
The paper does clearly identify its key contribution to propose a new algorithm for k-dominant spatial skyline queries.

Does the paper present any evidence to support the contribution claim?
The paper presents an algorithm, but does not show any proof to claim that the algorithm is either correct, complete, or performs in more efficiently than a "Naive" approach.

TECHNICAL EVALUATION:

Is the literature survey complete?
I would say that the literature survey is fairly complete. If anything were to be added, which may be beneficial would be some background literature on the general skyline query. It is well outlined in the paper, but some outside references may help to offer other explanations.

Is the work novel relative to the literature? Explain.
Yes, this work would be considered novel, if the proposed algorithm is able to be validated. It improves an existing technique for a new purpose (continuous querying)

As a reviewer do you agree with the contribution claims? Explain.
It is difficult to agree with the contribution claim before the algorithm has any method of validation, however, based on the algorithm alone, it would appear that it does perform better than the Naive approach. It is not understood however if the new algorithm performs more efficiently than the work proposed in reference [3].

READABILITY AND ORGANIZATION:

Is the paper easy to read and understand to students in this course (Csci 8701)?
The paper is a bit challenging to read because of the need for an understanding of the skyline query. It is within the scope of students in the Csci
8701 class, but would not be within the scope of new people into the field. More
detailed examples would be beneficial for an understanding of the problem. Also,
depicting with a hypothetical example would be beneficial in understanding the new
algorithm.

Is the paper self-contained?
The paper is self-contained. It could be understood within the scope of what
is presented.

Is the paper length reasonable?
The paper should be extended to include some sort of validation of the
algorithm, as well as presenting some examples of the algorithm.

Does it include sufficient number of figures and tables?
The use of additional figures would be beneficial for understanding how the
algorithm works. In addition, if performance is found, a figure presenting the
difference between performance of the Naïve approach the new approach, and any
other algorithms available. Existing figures are beneficial to the paper.

STRENGTHS:

What are the strengths of this paper?
The main strengths of this paper are: that it presents a novel method for
improving the processing of the k-dominated skyline query in an effort to prepare
it for use in more continuous environments. It also presents an algorithm, and has
the potential to be a good technique for enhancing the existing work.

AREAS FOR IMPROVEMENT:

How can this paper be improved? If you were to rewrite this paper, what
revisions would you consider?
A few things that you may wish to consider for improving this paper:

1.) List any limitations of the work that you have found.
2.) Validate the new algorithm in some way. Whether this is by example
or through a proof. A proof should show completeness and correctness. The primary
concern is that the results of the new algorithm would match the Naïve approach or
perform better than the Naïve approach.
3.) Discuss what algorithm was used in reference [3]. If this is the
naïve approach make reference to it.
4.) Provide some examples of the new algorithm. Also, provide a figure
for the examples or some way of showing the data and what would need to be added
for the new method.
5.) Reorganize the introduction of the paper to discuss what the
problem is. It is not clearly defined, that you are dealing with the efficiency of
the k-dominated skyline query. Also, consider moving some of the introduction
material into the related work. (This may not be needed if the problem definition
is put in the first paragraph to explain why you are discussing the introduction
material.)