Review of: "Solving Pallet loading Problem with Real-World Constraints"

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Potential competing interests: No potential competing interests to declare.

The authors investigated the pallet loading problem considering some real-world constraints which is an interesting practical problem. However, the main concept of the paper that is to propose a new method using the well-known branch and bound algorithm to solve the problem under study is not quite innovative. The paper suffers from some serious shortcomings which need to be addressed before it can be considered as notable research.

The literature review is not thorough. For such a significant practical topic, the general classification of the problem based on the solution method into two categories and a brief review of a few articles from each of these is not enough. The authors are expected to write a more comprehensive report which takes different approaches of mathematical modeling, objective functions, and constraints into consideration so a comparison between the current study and the existing literature can be made to identify the gaps and clarify the contributions of the authors. In addition, all the references are outdated. The most recent one is from 2016, while decent studies have been done on this issue in recent years. As a result, the literature required to be re-written with updated references.

The proposed problem needs to be explained more clearly and in more detail. Separating the assumptions and constraints and explaining them separately can be a good approach in this regard.

There are no numerical examples, nor an analysis or discussion on the experimental results and the authors skipped to the conclusion right after the description of the proposed solving method. In addition, to validate the proposed method and evaluate its performance, it should be compared with other existing benchmark methods to confirm its efficiency, accuracy, and outperformance.

No numbers were reported as the CPU time. since branch and bound is an exact solving method and the investigated problem belongs to the class of NP-Hard, solving problems of larger sizes would take a considerable amount of time. Authors should address how they encounter this issue. It is suggested to develop a heuristic, meta-heuristic, or hybrid method to handle such a scenario.

Eventually, the language should be double-checked. Mathematical expressions have to be numbered and checked carefully. Inaccuracies have been made in writing them, e.g., the use of index i in the formula inserted at the end of page 3 seems incorrect. There are other cases as well (the definition of set K for instance).

Best regards,

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