MOOA 6 Raport

As shown in the attached images, the libraries *pymoo* (Python) and *ParadisEO* (C++) produce similar results when using similarly implemented NSGA-II algorithms.

I don't observe any major differences in the outputs, so the main distinctions lie in the code complexity and execution time. A significant advantage of *pymoo* is its low entry barrier — it’s quite easy to write code for simpler problems. On the other hand, although working with *ParadisEO* requires considerably more time (especially for writing and compiling code), it's rewarding to see that it delivers similar results in much shorter execution time.

Conclusion: For personal use or prototyping, *pymoo* is more convenient. However, in a professional or high-performance environment dealing with more complex problems, the performance benefits of *ParadisEO* may justify the extra development effort.

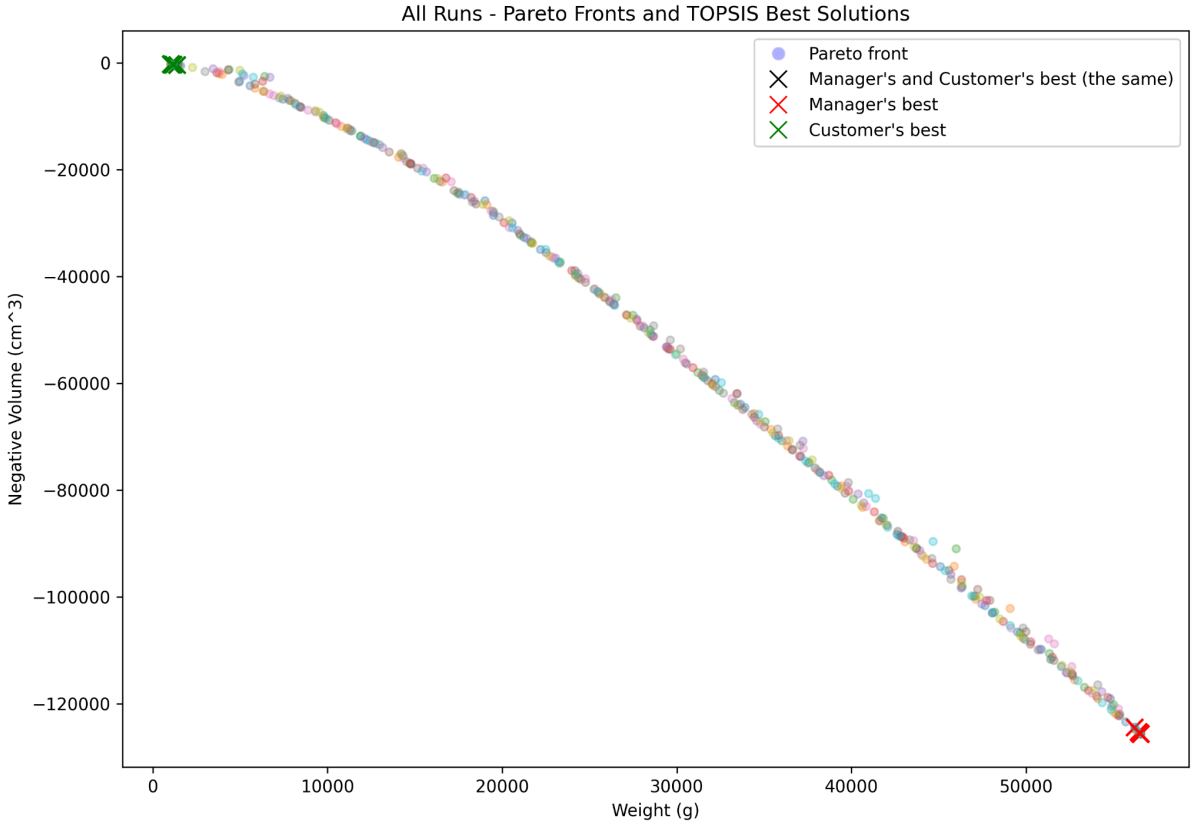

fig. 1. 10 runs of NSGA II with TOPSIS in pymoo

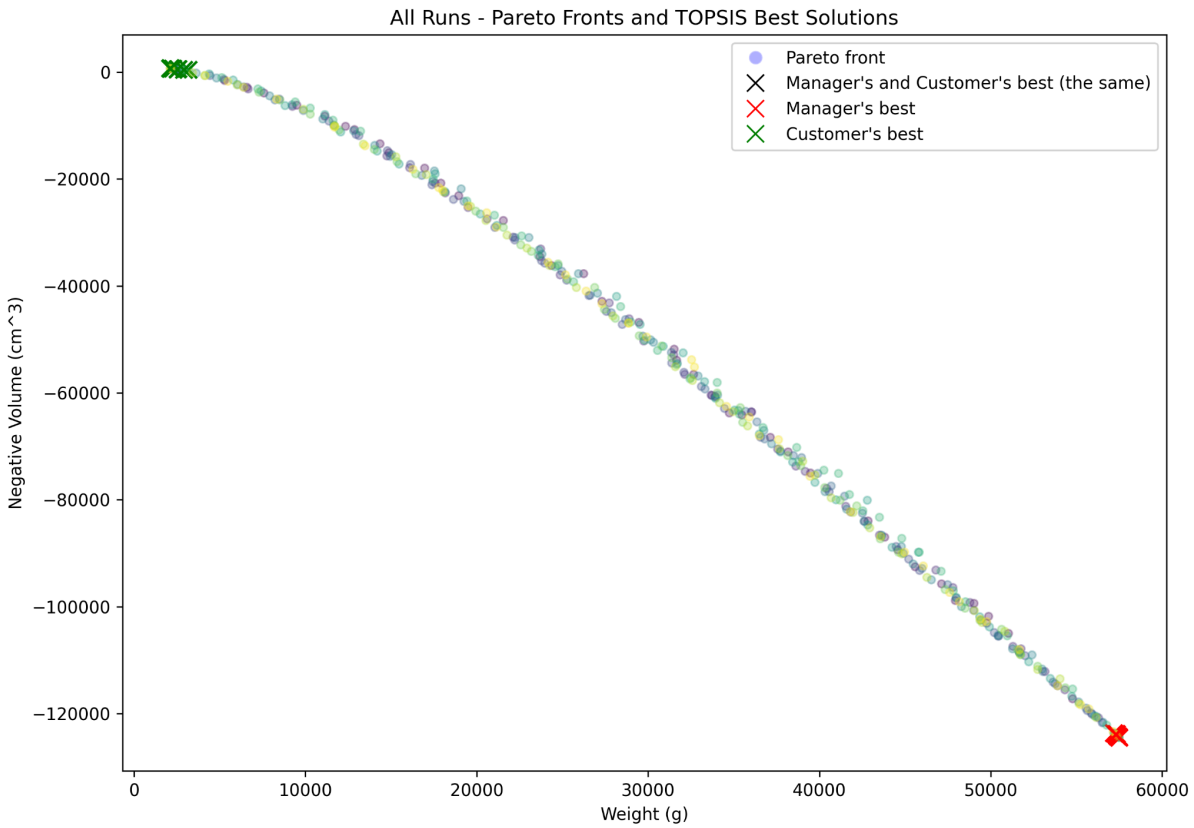

fig. 2. 10 runs of NSGA II with TOPSIS in ParadisEO