Title	AI-assisted preliminary design of a modular bicycle trailer
Aim and scope	
The work aims to preliminary design a modular bicycle trailer that performs at least two useful functions. The work's scope includes applying generative AI algorithms in problem formulation and concept development, particularly when solving technical contradictions and developing design ideas.	
Tasks	
1. Literature review of existing modular bicycle trailers 2. Functional modeling of a modular bicycle trailer 3. Concept development using systematic innovation and AI 4. Preparation of a geometric model using CAD 5. Modularity assessment of the modular bicycle trailer 6. Strength analysis of a load-carrying structure using FEM 7. Summary and conclusions	
Remarks	
We could incorporate into the work an algorithm using LLMs and NPL that will propose a module configuration based on the customer's text description of needs. This should be not-so-complex to be done. Machine learning, especially together with model training, may be problematic due to the availability of data. That is why I would like to leave it as an option. We may try to do it (and I would very much like to do it), but it is not a core part of the work.	

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